

First Record and Re-description of *Tenuipalpus eriophyoides* Baker (Acari: Prostigmata: Tenuipalpidae) in Egypt

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ABSTRACT

The tenuipalpid mite, *Tenuipalpus eriophyoides* is recorded for the first time in Egypt. Moreover, re-description for males and females collected on leaves of palm trees is provided.

Key Words: *Tenuipalpus eriophyoides*, morphology.

INTRODUCTION

Family Tenuipalpidae is worldwide in distribution and includes several economically important pest species (Mesa *et al.*, 2009). Although the members of the genus *Tenuipalpus* Donnadieu is the largest numbers in this family (Mesa *et al.*, 2009; Khanjani *et al.*, 2012) only two species belonging to genus *Tenuipalpus* have been recorded in Egypt (Zaher, 1984). Despite the high diversity of mites in Egyptian agro-ecosystems, the family Tenuipalpidae has been poorly studied (Halawa and Fawzy, 2014). Several papers on mites of this family were published by Sayed (1942, 1946, 1950), Attiah (1956), and Zaher (1984) where the following two species *Tenuipalpus granati* Sayed on grape-vine and *T. punicae* P. & B. on pomegranate were reported. Al-Gboory (1987) studied the false spider mites and referred to *Tenuipalpus eriophyoides* as a pest of date palm trees of central Iraq. Al-Gboory & Al-Houty, 1990 collected this species from Baghdad and Kuwait then re-described and illustrated it. From 1984 up to date no new records of *Tenuipalpus* species in Egypt have been obtained. This may be likely due to the few interest in this group of mites. So, this paper presents the first record and re-description of the flat mite, *Tenuipalpus eriophyoides* from Egypt.

MATERIALS AND METHODS

The flat mite *Tenuipalpus eriophyoides* was collected from leaves of palm trees in Sohag governorate through the survey programs of Plant Protection Research Institute on date palm trees during the period from 2010 to 2011. Samples were collected bi-weekly and transported in the same day to Shandaweel Agricultural Research Station, Agricultural Research Center (ARC), Sohag. Mites were collected using a fine hair brush under dissection stereo-microscope, then preserved in 70% ethanol. Selected mites were cleared in Nesbitt

solution for 10–12 minutes. Subsequently, mites were mounted on micro-slides in Hoyer's medium, and later dried at 40 °C for one week (Zhang, 2003). The terminology used in the key followed Linquist (1985) and Mesa *et al.* (2009). The measurements were given in micrometers (µm). The type materials were deposited in the mite collection of the Agriculture Research Center, Plant Protection Research Institute, Cotton and Crops Acarology Department, The mite was identified and described according to Meyer, (1987).

RESULTS AND DISCUSSION

Tenuipalpidae Berlese, 1913

Tenuipalpus Donnadieu, 1876

Tenuipalpus eriophyoides Baker, 1948: 59; Pritchard & Baker, 1958: 246.

Colopalpus eriophyoides Baker & Tuttle, 1972: 35; Al-Gboory & Al-Houty, 1990: 36.

Tenuipalpus labidosus Siddiqui & Chaudhri, 1972: 331; Chaudhri *et al.* (1974). Baker & Pritchard (1953b); Khosrowshahi & Arbabi (1997), Meyer (1979), Mitrofanov & Strunkova (1979), Chaudhri (1972c)

Description:

Female (Fig.1): Colour dark red. Gnathosoma without a pair of ventral gnathosomal setae, rostrum reaching above the first quarter of femur I. Palpus with three segments, the first (= basal) segment very small, the second segment the longest and bearing dorsally a pectinate seta and the third segment with a single sensory seta.

Dorsum: The rostral shield acutely and deeply bifurcate and not covering the rostrum. Propodosoma with a few transverse striations medially and posteriorly, remaining propodosomal area with a few irregular longitudinal and transverse striations. Eyes two pairs, one pair on each side. Dorsal propodosoma

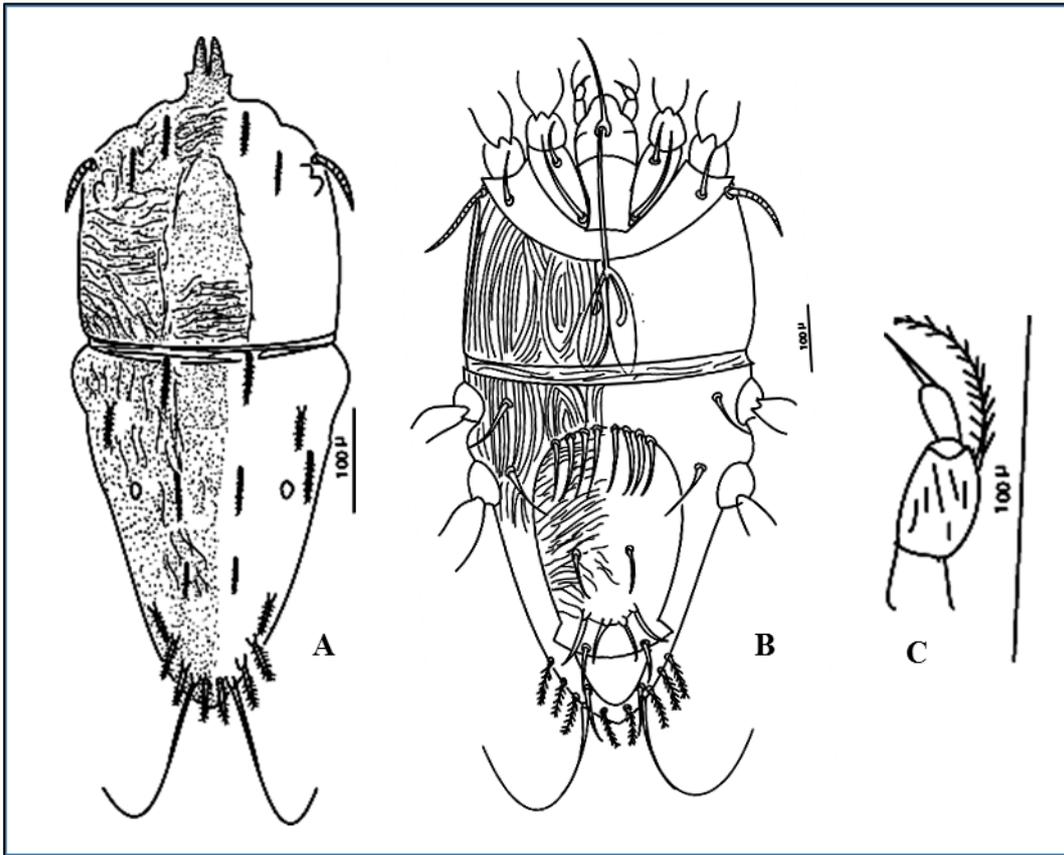


Fig. (1): *Tenuipalpus eriphyoides* (female): A. Dorsal idiosoma; B. Ventral idiosoma; C. Palpus.

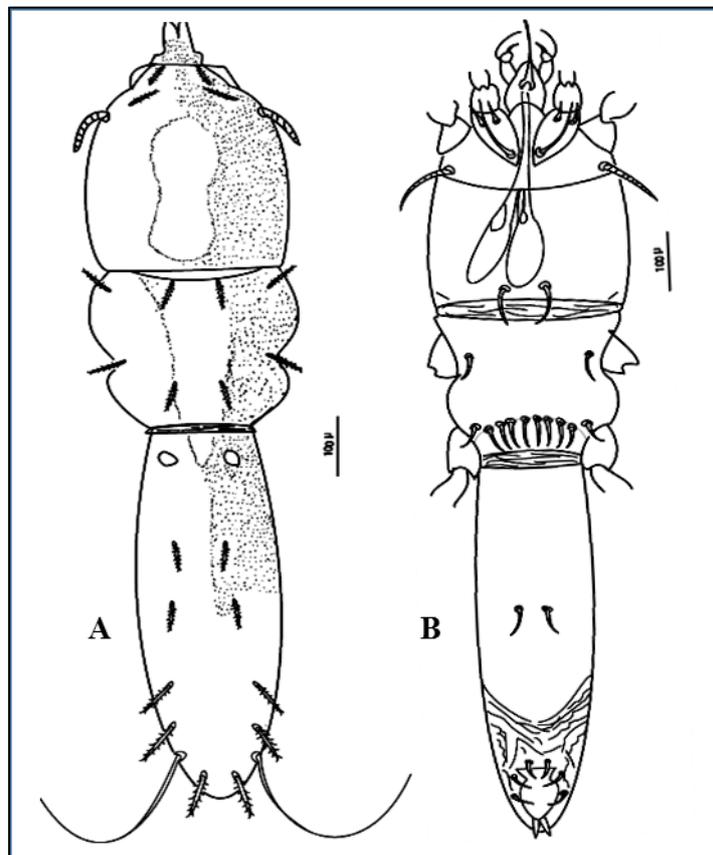


Fig. (2): *Tenuipalpus eriphyoides* (male): A. Dorsal idiosoma; B. Ventral idiosoma.

with three pairs of serrate, narrowly lanceolate setae. Humeral suture well defined medially and laterally. Hysterosoma with few longitudinal striations laterally in front of areas of legs III and IV. The dorsomedial area of hysterosoma without striations, with one pair of pores, one on each side. Dorsocentral hysterosoma with three pairs of serrate, narrowly lanceolate setae and with one pair of humeral serrate setae. Dorsolateral hysterosoma with six pairs of setae; I, II, III, IV and VI serrate and (V) flagelliform. Dorsum has pitted appearance.

Venter: Venter of propodosoma and metapodosoma with regular, longitudinal striations up to the bases of posterior medioventral metapodosomal setae. Medioventral propodosoma with one pair of whip-like, simple setae. Anterior medioventral metapodosoma with one pair of simple setae. Posterior medioventral metapodosoma with four pairs of simple setae, having the same length and reaching bases of the genital setae. The genito-ventral (= ventrigenital) shield with transverse striations; ventral with one pair of simple setae. Genital with two pairs of simple setae. Anal shield distinct with two pairs of simple setae.

Legs: With four pairs of wrinkled and pitted segments.

Legs I - IV chaetotaxy as follows:

Podomers	L1	L2	L3	L4
Coxae	2	2	1	1
Trochanters	1	1	1	1
Femora	4	4	2	1
Genua	2	2	1	1
Tibiae	5	5	3	3

Tarsi I and II each with a single solenidion.

Male (Fig.2): The male is very distinctive in having an elongate body, especially the opisthosoma. Gnathosoma as in the female.

Dorsum: Rostral shield deeply cleft and covers the rostrum. Propodosoma pitted without striations. The posterior part of propodosoma smooth medially. Hysterosoma pitted except smooth area between the first dorsocentral hysterosomal setae and the end of opisthosoma. Hysterosoma divided into two parts with transverse striae. One pair of pores present. Dorsal body setae similar to those of the female.

Venter: With few transverse striations mostly between the metapodosoma and opisthosoma. Medioventral propodosomals, anterior medioventral metapodosomals and posterior medioventral metapodosomals similar to that in the female. Ventral

shield, not well distinct, with one pair ventral setae. Genitoanal shield with three pairs of genitoanal, simple setae. End of the body with one pair of terminal genital stylets.

Legs: Leg chaetotaxy resembles that of female, except that tarsi I-IV each with two solenidia.

Type specimens: Six females and two males collected from Sohag governorate, deposited at the Mite Collection of Plant Protection Research Institute, Agricultural Research Center, Cotton and Crops Acarology Department, Dokki, Cairo, Egypt.

Remarks: This species is found with a high host specificity, living on both sides of leaves of palm trees.

ACKNOWLEDGEMENTS

Authors express their deep gratitude to Dr. A. M. Halawa (Fruit Acarology Department, Plant Protection Research Institute, Agricultural Research Centre, Dokki, Giza, Egypt) for his help, support and cooperation. Deepest thanks also extended to Dr. R.I.A. Abo-Shnaf (Vegetable and Aromatic Plant Mites Department, Plant Protection Research Institute, Agricultural Research Centre, Dokki, Giza, Egypt) for assuring identification of mite materials.

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