A NEW SPECIES OF *PETROBIA* MURRAY FROM WHEAT AND OTHER CROP PLANTS IN EGYPT (ACARI: TETRANYCHIDAE)

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Abstract

A new species, *Petrobia* (*Mesotetranychus*) *tritici* is collected in newly reclaimed lands located in Sharkeia Governorat, Egypt, from wheat (*Triticum aestivum* L.), barley (*Hordeum vulgare* L.), sorghum (*Sorghum vulgare* Pers.), garlic (*Allium carinatum* L.), clover (*Trifolium alexandrinum* L.), lupin (*Lupinus angustifolius* L.) and sugar beet (*Beta vulgare* L.). This new species is described and illusterated along with a key to the Egyptian species of genus *Petrobia* Murray.

Key words: *Petrobia* (*M.*) *tritici* n.sp., Tetranychidae, Taxonomy.

INTRODUCTION

The mite *Petrobia* (*Petrobia*) *latenes* (Müller) is considered the only species representing genus *Petrobia* Murray in Egypt till 1982. In her taxonomic study of the tetranychid mites in Africa, Meyer (1974) recorded *P.* (*P.*) *latenes*, *P.* (*P.*) *phaceliae* Tuttle & Baker, *P.* (*P.*) *brevipes* Reck & Bagdasarian, *P.* (*Mesotetranychus*) *tunisiae* Manson and *P.* (*M.*) *vachustii* (Reck). Zaher *et al.* (1982) described *P.* (*M.*) *lycopersici* Zaher, Gomaa & El-Enany on tomato, *Lycopersicum esculentum* Mill from Egypt. Meyer (1987) added six species of *Peteobia* in Africa in addition to the five species previously recorded by her in 1974. These are *P. xerophila* Mitrofanov, *P.* (*P.*) *mexicana* Baker & Tuttle, *P.* (*M.*) *waltheriae* Tuttle, Baker & Abbatiello, *P.* (*M.*) *lycopersici* Zaher, Gomaa & El-Enany in addition to her new species, P. *haematoxylon* and *P. (M.) enodis* which were described and illusterated.

The new mite species, *Petrobia* (*Mesotetranychus*) *tritici* was collected from newly reclaimed lands in Sharkeia Governorate, Egypt from El-Salheia, El-Khatara and San-Alhagar regions on wheat and barley. Also, it was recorded on sorghum, sugar beet, clover and lupin in El-Salheia, on garlic in El-Khatara and on onion in San Alhagar.

Terminologoy used by Pritchard & Baker (1955) was adapted to describe the new species.

Key to species of *Petrobia* in Egypt

(Females)

(1) Peritreme anastomose distally..... Subgenus *Petrobia*, dorsal body setae shorter than intervals between them, tarsus I with 23 setae, leg I longer than the body .....*P.* (*Petrobia.*) *latenes*

* Peritreme ends simply ..... subgenus *Mesotetranychus*, first pair of propodosamal setae longer than other propodosomals .....(2)

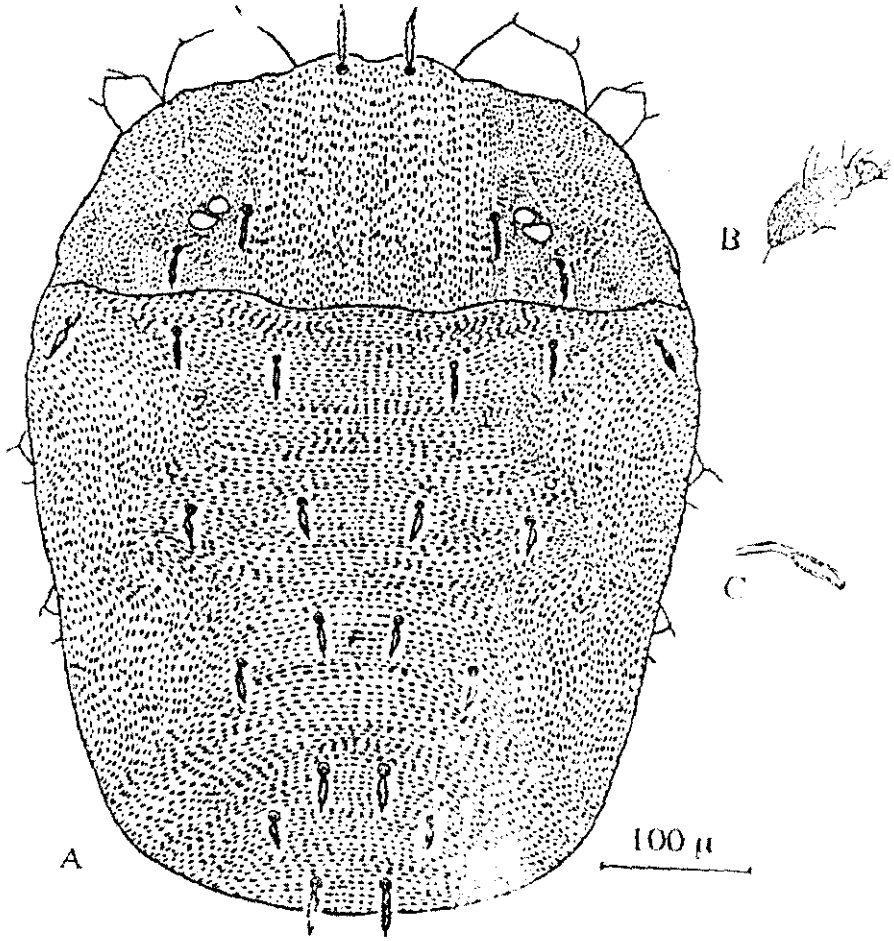

Fig. 1. *Petrobia tritici* n.sp., Adult female, A. dorsum, B., palp and C. peritreme.

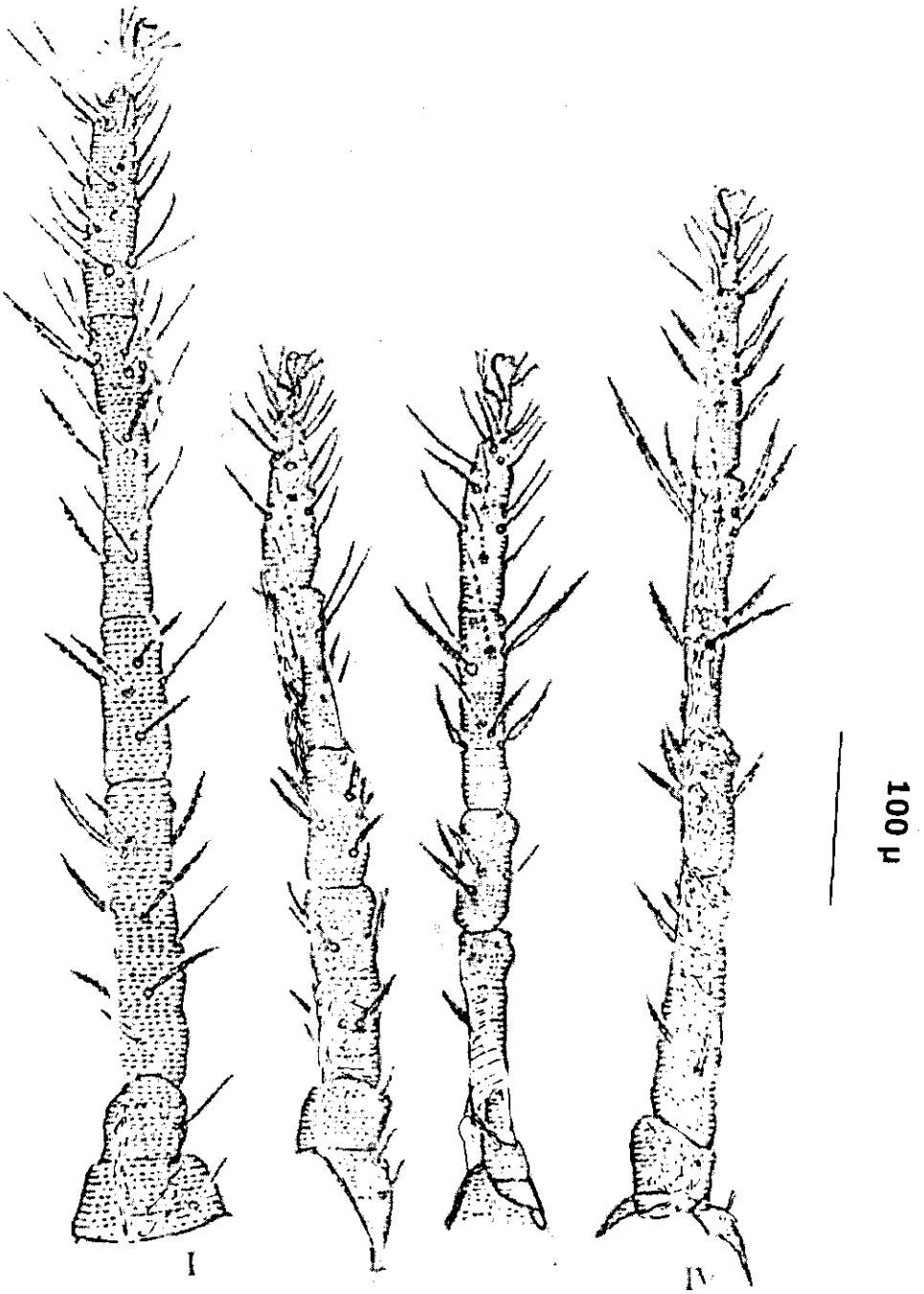

Fig. 2. petrobia tritci n. sp., Adult female. Legs (I-IV), respectively.

(2) Body ovate, humeral setae arise in a same row with the first dorsolateral setae, sacral setae externae shorter than clunal setae ..... *P.* (*Mesotetranychus*) *tritici* n.sp

* Body rectangulate, humeral setae arise latter to the first dorsolateral setae, sacral setae externae longer than clunal setae ..... *P. (Mesotetranychus) lycopersici*

***Petrobia tritici* n.sp.**

(Figs. 1 – 4)

Female (Figs. 1 & 2):

Body elongate oval, olivaceous in colour when alive, length 706 mμ including gnathosoma, 579 mμ. excluding gnathosoma, width 381 mμ; dorsal setae broadly lanceolate serrate arising from normal alvioli.

Propodosoma: With 3 pairs of setae, the first pair (verticals) about two times the second and the third subequal propodosomals, longitudinal loobed striae occur medially and being irregular in the area between ocelli and body margin, with two paris of ocelli.

Hysterosoma: With 10 pairs of setae, the 10*th* pair (clunals) is the longest, about twice as long as the rest, with loobed transverse striae medially but longitudinal and irregular at body margin.

Gnathosoma: Stylophore rounded anteriorly, peritreme terminates in a simple bulb.

Legs: Leg I slightly shorter than body, 602 mμ long, leg II 404mμ, leg III 396, leg IV 480mμ, empodia claw-like with two rows of medioventral tenent hairs, true claws pad-like, half length of empodium, each with tenent hairs, setae on leg podomeres (including solenidia in parentheses) + duplex setae as follows: coxae (2-2-1-1), trochanters (1-1-1-1), femora (9-6-4-4), genua (5-5-4-4), tibiae (13 (l)-9-9-9) and tarsi 19 (1) + 2 duplex -15 + 1 duplex -14 (1) -14 (1).

Male (Figs. 3 & 4):

Body elongate oval, yellow greenish in colour when alive, length 533mμ including gnathosoma, 420 mμ excluding gnathosoma, width 236 mμ, peritreme anastomosing distally, penultimate palpal segment with 5 setae, dorsal setae subequal, serrate, strong and tapering distally.

Propodosoma with 3 pairs of setae, the first (verticals) being twice as long as the other two subequal propodosomals, with loobed striae medially, being transverse at propodosomal posterior end and irregular at body margin to reach near the end of hysterosoma.

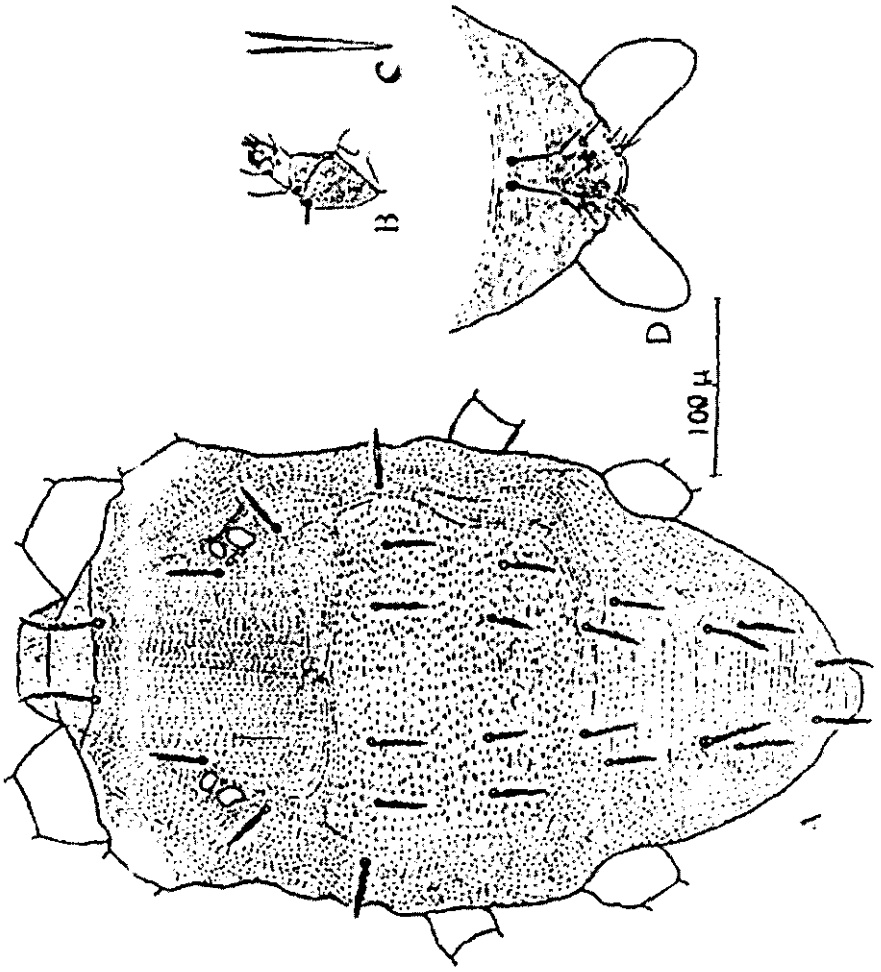

Fig. 3. *Pctrobia tritici* n.sp., Adult male. A. dorsum, B. palp, C. aedeagus and D.venter of idiosoma.

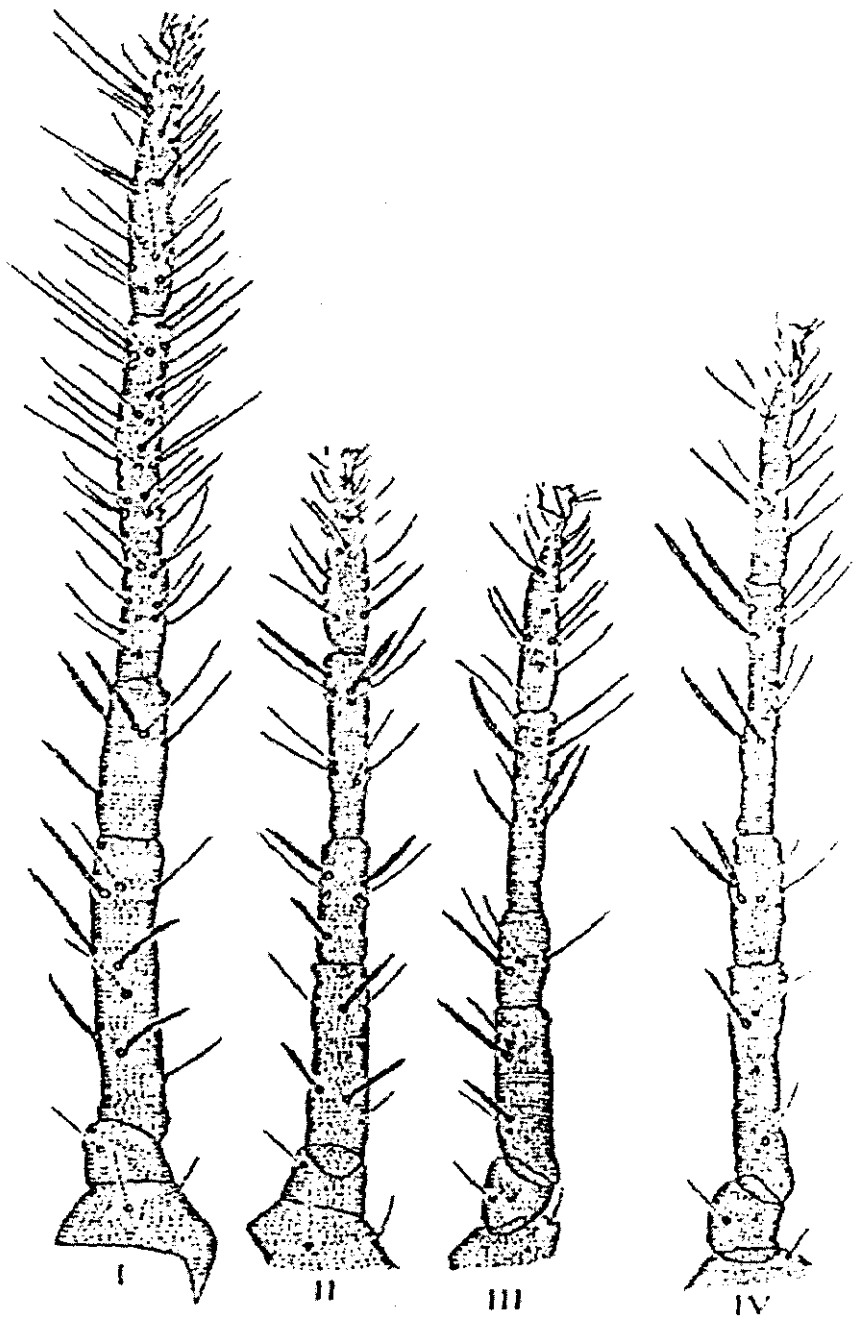

Fig. 4. *Petrobia tritici* n.sp., Adult male, legs (I-IV), respecti

Hysterosoma with 10 pairs of setae, punctation occur in the area of the first two rows of setae, loobed striae occur medially at the rest of the body.

Aedeagus elongate and tapering.

Ventrally, opisthosoma with two pads.

Legs,: Leg I, longer than body, 762 mμ, long, leg II, 511 mμ, leg III, 472 mμ; leg IV, 617 mμ, empodia claw - like with two rows of medioventral tenent hairs, true claws pad-like, each with tenent hairs. Setae on leg podomeres (including solenidia in parentheses) + duplex setae as follows: coxae (2-2-1-1), trochanters (1-1-1-1), femora (9-6-4-3), genua (5-5-4-4), tibiae (33 (1) + 1 duplex -9-9-9) and tarsi [27 + 3 duplex - 15 (1) + 1 duplex - 14 (1) -14 (1)].

Holotype : Female found on wheat, El-Salheia locality, Sharkeia Governorate, Egypt.

Paratypes: Several females on the same host, El-Salheia and El-Khatara localities, Sharkeia Governorate,Egypt.

Allotype : Male with the same data of holotype and paratypes.

Diagnosis:

This species stands near *Petrobia* (*Mesotetranychus*) *waltheriae* Tuttle, Baker and Abbatiello but differs in the shape of the dorsal setae, striae and ocelli. It is characterized by that the first pair of propodosomal setae (verticals) being twice as long as the other two subequal propodosomals. Clunal setae nearly twice as long as the other subequal dorsocentral setae.

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نوع جديد من جنس ***Petrobia*** **Murray** على القمح ونباتات محاصيل أخرى فى مصر (الاكاروسات: فصيلة الحلم العنكبوتى العادى)

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تم جمع أفراد هذا النوع الجديد *Petrobia* (*Mesotetranychus*) *tritici* الذى يصيب نباتات القمح والشعير والسورجوم والثوم والبرسيم المصري والترمس وبنجر السكر فى الاراضى الحديثة الاستصلاح بمنطقتى الصالحية و الخطارة بمحافظة الشرقية – ج. م. ع. وقد تم وصف هذا النوع الجديد ورسمه مورفولوجيا كما تم وضعه فى مفتاح تصنيفى الى جانب الأنواع التابعة لجنسه فى مصر.