

THREE NEW SPECIES OF THE GENERA ERIOPHYES
AND PHYTOPTUS IN EGYPT
(ERIOPHYOIDEA : ERIOPHYIDAE)

BY

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ABSTRACT

Two new species of the genus *Eriophyes* and one new species of the genus *Phytoptus* are described. *Eriophyes melongenensis* sp. n., was found on *Solanum melongenensis* infesting new and well developed leaves preferring the lower surface, *Eriophyes imperata* sp. n. on *Imperata cylindrica* under leaf-sheath, and *Phytoptus nalepi* sp. n., on *Pyrus communis* infesting buds.

RÉSUMÉ

Deux espèces nouvelles du genre *Eriophyes* et une espèce nouvelle du genre *Phytoptus* sont décrites. *E. melongenensis* sp. n. a été récoltée sur *Solanum melongenensis* ; elle s'attaque aux jeunes feuilles bien développées et de préférence à la face inférieure des feuilles. *E. imperata* sp. n. vit sous les feuilles en fourreau d'*Imperata cylindrica* et *Phytoptus nalepi* sp. n. infeste les bourgeons de *Pyrus communis*.

ERIOPHYINAE

***Eriophyes melongenensis* sp. n.**

(Fig. 1)

This species is similar to *E. datura* Soliman & Awad (1978) but can be differentiated in having shield with two shoulders anteriorly, incomplete median line with two small branches directed backward and complete admedian lines attached with median line by dots making two triangular ; microtubercles elongated oval ; genitalia with about 15 longitudinal scorelines.

FEMALE. — 220.5-257.5 μ long, 60-71.2 μ wide ; elongate wormlike and tapering posteriorly ; light yellow. Rostrum about 26 μ long, straight directed down at slight angle to body. Shield 33 μ long, 54 μ wide, with two shoulders anteriorly, subtriangular, with incomplete median line having two medio small lines directed backward, complete admedian lines attached with median

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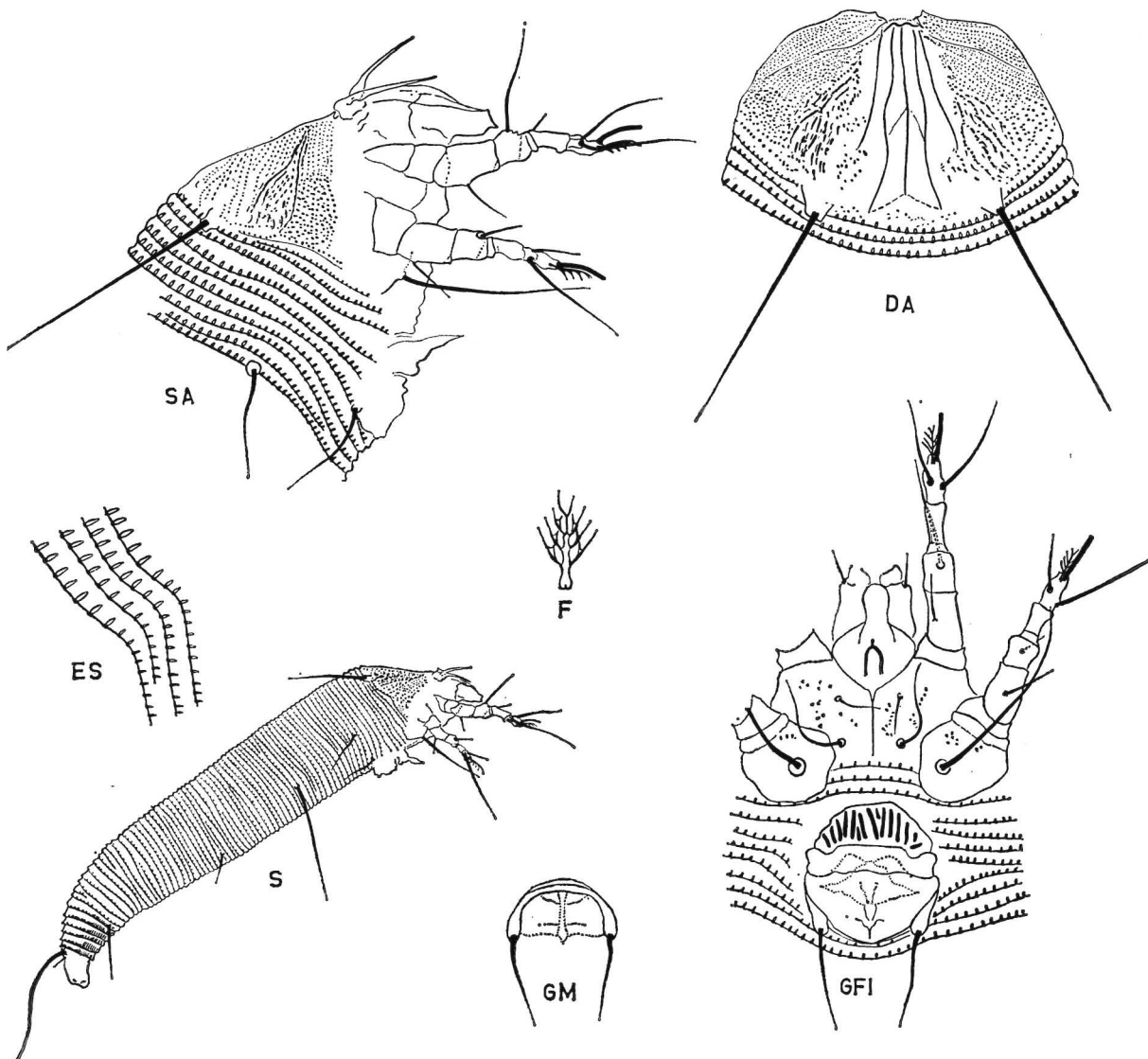


FIG. 1 : *Eriophyes melongenus* sp. n.

DA) dorsal view of anterior section of shield ; SA) side view of anterior section ; F) featherclaw ; ES) side skin structure ; S) side view of adult mite ; GFI) female genitalia and anterior section ; GM) male genitalia, ventral view.

line by dots making two triangulars, incomplete submedian lines, and diagonal anterior lines ; side shield granules and many very fine dots oriented in lines. Dorsal tubercles $23\ \mu$ apart, on rear margin ; the seta $40\ \mu$ long and projecting backward. Forelegs $32\ \mu$ long ; femur $9.5\ \mu$ long, seta about $8.5\ \mu$ long ; genu $5\ \mu$ long, seta $19\ \mu$ long ; tibia $7\ \mu$ long ; seta $4.5\ \mu$ long ; tarsus $7\ \mu$ long, outside seta about $20\ \mu$ long. Claw $7.3\ \mu$ long, curved, without clear knob at tip. Axis of featherclaw undivided, 4-rayed and shorter than claw. Hindlegs $28\ \mu$ long ; $7.5\ \mu$ long, seta $8.5\ \mu$ long ; genu $4.5\ \mu$ long, seta $8\ \mu$ long ; tibia $6\ \mu$ long, without seta ; tarsus $6.5\ \mu$ long outside seta about $21\ \mu$ long. Claw $8\ \mu$ long, slight curved and without knob at tip. Axis of featherclaw undivided, 4-rayed and shorter than claw. Tarsal outside seta of both legs situated on tubercle.

Anterior coxae contiguous, each with two setae ; coxal setae I & II equally apart, setae II near base of sternal ridge ; posterior coxa contiguous with anterior one and with single seta ; seta of coxa II 36 μ long. Both coxae I & II with few dots, the second with fewer number. Anterior coxa larger than posterior one. Abdominal rings, from immediately behind shield to anal lobes counted 73 dorsally and 71 ventrally. Rings completely microtuberculate. Microtubercles evenly spaced along the rings, similar in all areas, varying only in size, elongate ovally, and placed on posterior margin of annular rings. Lateral thanosomal seta 19 μ long, above and behind genital seta, on about ring 9 ; 1st ventral seta 57 μ long, on ring 22 ; 2nd ventral seta 15 μ long, on ring 42 ; 3rd or telosomal seta 22 μ long, on about ring 66. The thanosome with 67 rings dorsally and 65 rings ventrally. Telosome with 6 rings strong and with microstriations ventrally. Caudal and accessory setae arise from a lobe behind the last tergite. Caudal seta 59 μ long ; accessory seta 4.5 μ long. Female genitalia 29 μ long, 24 μ wide, with about 15 longitudinal scorelines ; subcordate ; seta 16 μ long, arising from moderate tubercle.

MALE. — 210-225 μ long and 55-62.5 μ wide ; male genitalia 14 μ long and 23 μ wide ; seta 15 μ long.

Type locality : Alexandria. Collected April 5, 1973.

Host : *Solanum melongena* ; egg plant (Solanaceae).

Relation to host : The mite was frequently found infesting new and well developed leaves preferring the lower surface, but during high infestation, it was noticed on both surface and around the leaf petiole.

Type material : The holotype, allotype and paratypes kept in the collection of faculty of Agriculture, Cairo University.

***Eriophyes imperata* sp. n.**

(Fig. 2)

This species resembles *E. cynodontiensis* (Sayed) (= *Aceria cynodontiensis* S. (1946)) (JEPPSON *et al.*, 1975) but differs in having shield somewhat rounded with incomplete median line, complete admedian lines, submedian lines irregular forming a network of cellular shape on each side. Abdominal rings counted about 81 rings dorsally and 74 ventrally. Microtubercles elongate ovally.

FEMALE. — 237.5-290 μ long, 53.8-57.5 μ wide ; elongate wormlike, narrowed posteriorly ; translucent white in colour. Rostrum about 16.5 μ long, projecting diagonally ahead and down. Shield 34 μ long, 41.5 μ wide, truncate across at rear of rostrum, laterally convex, with incomplete median line, complete admedian lines, submedian lines irregular forming a network of cellular shape on each side, lateral shield dots oriented in curves, dorsal disc with dashes, Dorsal tubercles 20 μ apart, small on rear margin ; the seta 42 μ long and projecting backward. Forelegs 23 μ long ; femur 7 μ long, seta 5.5 μ long ; genu 3.5 μ long, seta 18.5 μ long ; tibia 3 μ long, seta 5 μ long ; tarsus 4.5 μ long, outside seta about 18 μ long. Claw 7.3 μ long curved, without clear knob at tip. Axis of feather-claw undivided, 7-rayed and shorter than claw. Anterior coxae contiguous at posterior two thirds, sternal ridge forked, two setae on each coxa ; setae I wider apart than setae II, which situated at base of sternal fork ; posterior coxa contiguous with anterior one and with a single

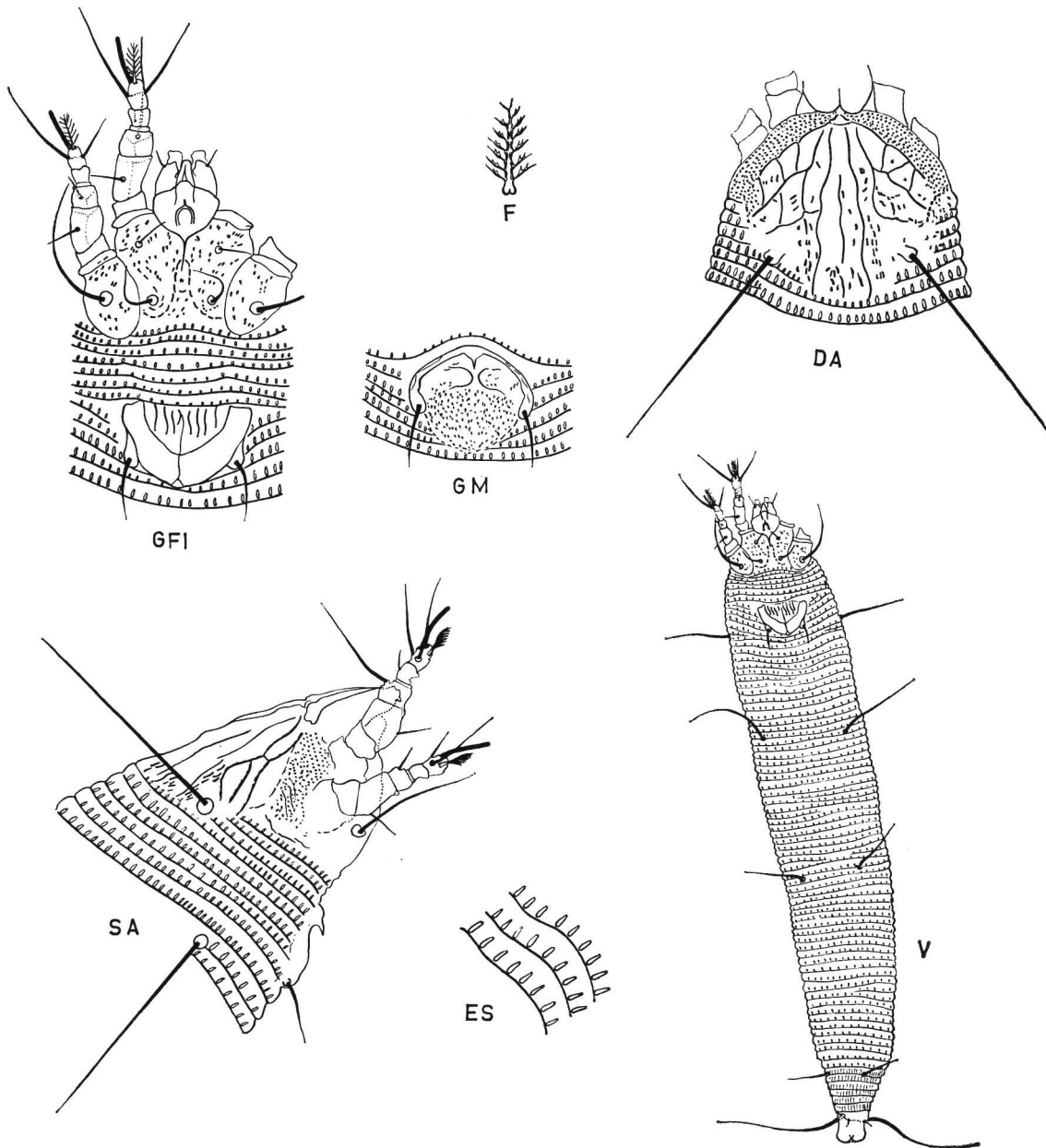


FIG. 2 : *Eriophyes imperate* sp. n.

DA) dorsal view of anterior section of shield ; SA) side view of anterior section ; F) featherclaw ; ES) side skin structure ; V) ventral view of adult mite ; GFI) female genitalia and anterior section ; GM) male genitalia, ventral view.

seta, measuring 25 μ long. All coxae strongly granulated. Coxae I larger than coxae II. Abdominal rings, from immediately behind shield to anal lobes, counted about 81 rings dorsally and 74 ventrally. Rings completely microtuberculated. Microtubercles evenly spaced along the rings, similar in all areas, elongate ovaly, and located on posterior margin of annular rings. Lateral thanosomal seta 37 μ long, behind genital seta, on about ring 7; 1st ventral seta about 40 μ long, on ring 22; 2nd ventral seta 33 μ long, on ring 42; 3rd ventral or telosomal seta 17 μ long, on about ring 69. The thanosome with about 75 rings counted dorsally and 68 ventrally. Telosome with 6 rings, strong and with microstriations ventrally. Caudal and accessory setae from a lobe behind the last tergite. Caudal seta about 55 μ long; accessory seta 3 μ long. Female genitalia 14 μ long, 20 μ wide, horse shoe-shaped, with 8 longitudinal scorelines; seta 11 μ long, arising from small tubercle.

MALE. — 240 μ long, 53.8 μ wide. Male genitalia 16 μ long, 21 μ wide; seta about 11 μ long.

Type locality : Gamasa, Dakahlia. Collected May 23, 1973.

Host : *Imperata cylindrica*, Halfa of cat tail (weed).

Relation to host : The mite was found, under leaf-sheath. Infested plants were usually stunted and leaves much crowded and overlapping.

Type material : The holotype, allotype and paratype kept in the collection of faculty of Agriculture, Cairo University.

***Phytoptus nalepi* sp. n.**

(Fig. 3)

This species resembles *Phytoptus pyri* Pgst. (= *Eriophyes pyri* (Pgst.) (KEIFER, 1938) but differs in the following : Dorsal shield rectangular, with slight anterior projection, with shoulders and more broader; admedian lines incomplete and not connecting behind median line; lateral lines formed of thick irregular dashes. Microtubercles large elongate oval dorsally and small ovoid ventrally, located in sinuated annular rings. All coxae free from granules.

FEMALE. — 217.5-237.5 μ long, 57.5-65 μ wide, elongated wormlike and narrowed posteriorly; colour rather whitish. Rostrum about 28 μ long, gently bent down. Shield 27 μ long, 47 μ wide, rectangular, with slight projection over the rostrum and truncate across at rear rostrum, with incomplete very short median and admedian lines; admedian lines bracket-shaped; lateral lines formed of thick dashes between fine dots. Dorsal tubercles 15 μ apart, set ahead of rear margin; the seta 22 μ long and directed forward. Legs moderately stout. Forelegs 28 μ long; femur 8 μ long, seta 7 μ long genu 15 μ long, seta 17 μ long; tibia 5.5 μ long, seta 6.5 μ long; tarsus 6.5 μ long, outside seta 19 μ long. Claw 6.5 μ long, slight curved, and with moderate knob at tip. Axis of featherclaw undivided, 4-rayed, and shorter than claw. Hindlegs 26 μ long; femur 7.5 μ long, seta 7 μ long; genu 4.5 μ long, seta 11 μ long; tibia 4.5 μ long, without seta; tarsus 6 μ long, outside seta 19 μ long. Claw 8 μ long, slight curved, without clear knob at tip. Axis of featherclaw undivided, 4-rayed and shorter than claw. Sternal ridge not forked at rear; anterior coxae contiguous, with two setae on each; coxal setae I narrower apart than seta II, which situated at base of sternal ridge; posterior coxa

contiguous with anterior one and with single seta measuring $30\ \mu$ long. All coxae free from granules. Abdomen with about 74 microtuberculated rings. Microtubercles evenly spaced along the rings, large elongate oval dorsally and small ovoid ventrally, located in sinuate annular rings. Lateral thanosomal seta $23\ \mu$ long, above and behind genital seta, on about ring 7; 1st ventral seta $33\ \mu$ long, on ring 20; 2nd ventral seta $7\ \mu$ long, on ring 38; 3rd ventral or telosomal seta $18\ \mu$ long, on about ring 68. The thanosome with about 67 rings. Telosome with 7 rings, strong and with microstriations ventrally. Caudal and accessory setae arise from a lobe behind the last tergite. Caudal seta about $75\ \mu$ long; accessory seta $7\ \mu$ long. Female genitalia $14\ \mu$ long, $22.5\ \mu$ wide, with 11 longitudinal markings; bowel-shaped; seta $9\ \mu$ long, arising from moderate tubercle.

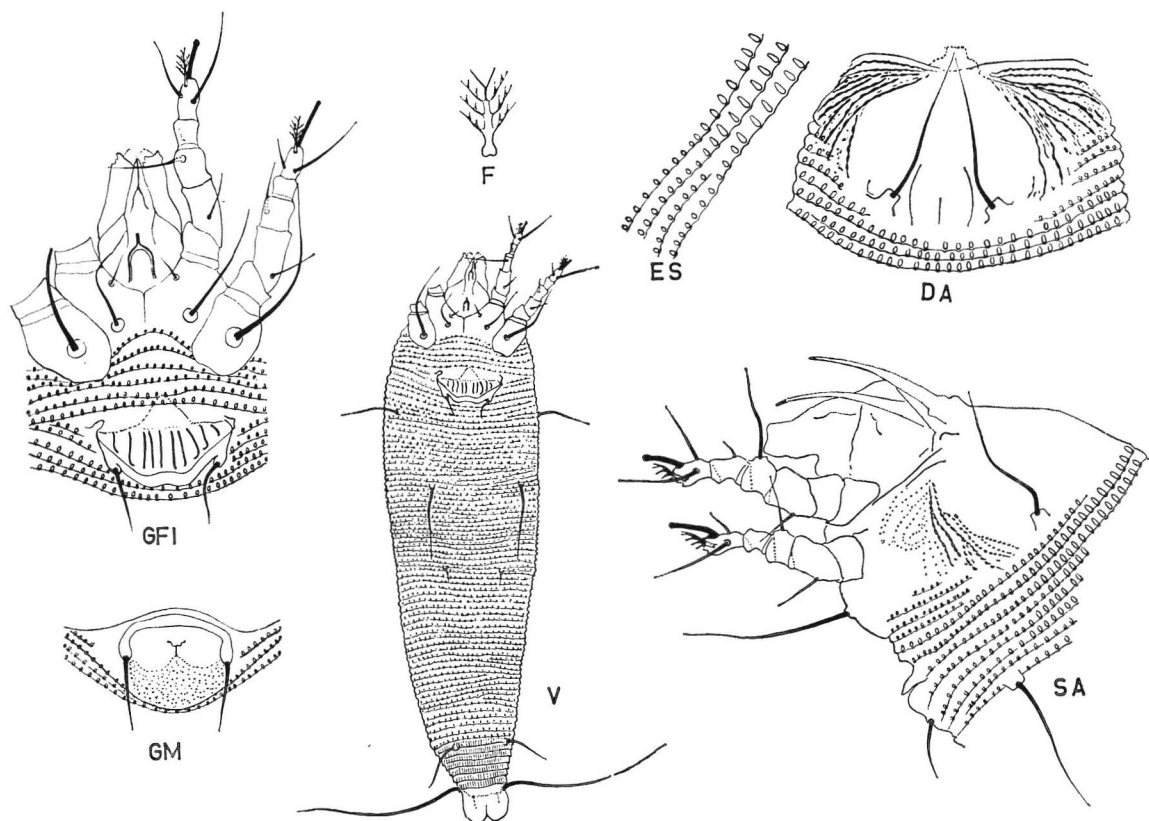


FIG. 3 : *Phytoptus nalep* sp. n.

DA) dorsal view of anterior section of shield, SA) side view of anterior section; F) featherclaw; ES) side skin structure; V) Ventral view of adult mite; GFI) female genitalia and anterior section; GM) male genitalia, ventral view.

MALE. — $207.5\ \mu$ long $57.5\ \mu$ wide. Male genitalia $13\ \mu$ long, $18.5\ \mu$ wide; seta $10\ \mu$ long.

Type locality : Foowa, Kafr El-sheikh. Collected May 7, 1973.

Host : *Pyrus communis*, pear.

Relation to host : The mite was found under scales of unopened buds of the pear trees, causing malformation. It was noticed to be the main eriophyid pest infesting pear trees in Egypt.

Type material : The holotype, allotype and paratypes kept in the collection of faculty of Agriculture, Cairo University.

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Paru en Octobre 1979.
