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A NEW SPECIES OF THE GENUS *NEOCUNAXOIDES* (Acari: Cunaxidae) IN EGYPT

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ABSTRACT

Neocunaxoides fayoumi sp. n. (Cunaxidae) was considered to be new. Description of adult female and male were done. Individuals of *N. fayoumi* sp. n., were found in debris under several fruit trees especially citrus trees at Fayoum Governorate.

Keywords: *Neocunaxoides fayoumi* sp. n., Cunaxidae, Description.

INTRODUCTION

(Smiley, 1975) studied the generic classification of the family Cunaxidae. Nine genera were recognized as comprising of the family, and four of these, *Neocunaxoides*, *Pseudocunaxa* (*Coleoscirus*), *Pseudobonzia*, and *Parabonzia*, were newly erected based on palpal morphology, number of segments, type of setae, location of dorsal shield setae and dorsal flanges. EL-Bishlawy (1978), described two new species of genus *Neocunaxoides*. Descriptions of *Neocunaxoides dilato* sp. n. and *N. kalamiensis* sp. n., predators of plant-feeding mites and small insects was given with a key for genus *Neocunaxoides* by (Inyatullah and Shahid, 1989). (Smiley, 1992) established the new classification of family Cunaxidae. This family was divided into nine subfamilies as the following: Cunaxoidinae, Bonziinae, Cunaxiinae, Denheyemaxoidinae, Paracunaxoidinae, Coleosciriniae, Neobonzinae, Orangescirulinae and Scirulinae. One hundred and sixty species were illustrated and described. Thirty-nine species were newly assigned to the family and were distributed among seventeen genera of which three species were newly (*Neobonzia*, *Denhyemaxoides* and *Paracunaxoides*). Nine species synonymies and eighteen new combinations were established. The number of palbal segments, the different types of papal setae, and type of setae on the anterior portion of the hypostome served as the main basis of separating the subfamilies, genera and species. The systematic relation ship of Cunaxidae to the super family Bdelloidea was discussed. *Neocunaxoides ovatus* sp. n. was collected from moss in Fujian Province, it was described and illustrated. A key to Chinese species of the genus was also presented by (Jianzhen *et al.*, 2003).

MATERIALS AND METHODS

According to (Smiley, 1992) individuals of *N. fayoumi* sp. n. were transferred to vials containing Nessbit solution for 5-7 h. depend on its

sclerotization degree, then mounted in Hoyer's solution on clear glass slide. A light microscope was used to study the specimens.

A label was placed on the slide with host, locality, and date. Then slides examined to classify the species; through referring to the literature and draw it by drawing eyepiece.

RESULTS AND DISCUSSION

Diagnosis:

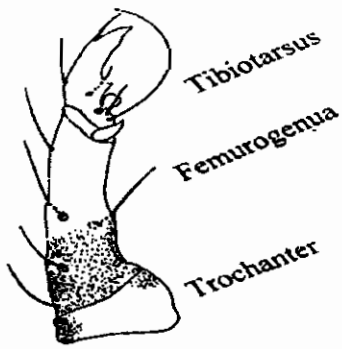
N. fayoumi sp. n. is most closely related to *Neocunaxoides rykei* Den Heyer, by possising a single medial plate adjacent to the genital plate and differs in that, the palpal tibiotarsus of *N. rykei* haven't a mushroom-shaped seta, and it's present on *N. fayoumi*, the femurogenua has six pairs of simple setae, but in *N. fayoumi*, this segment has only five, also the chaetotaxy of legs are most closely different especially in genu, which hasn't solenidion setae, but in *N. rykei* it present in all legs.

Description:

Female:

Gnathosoma:

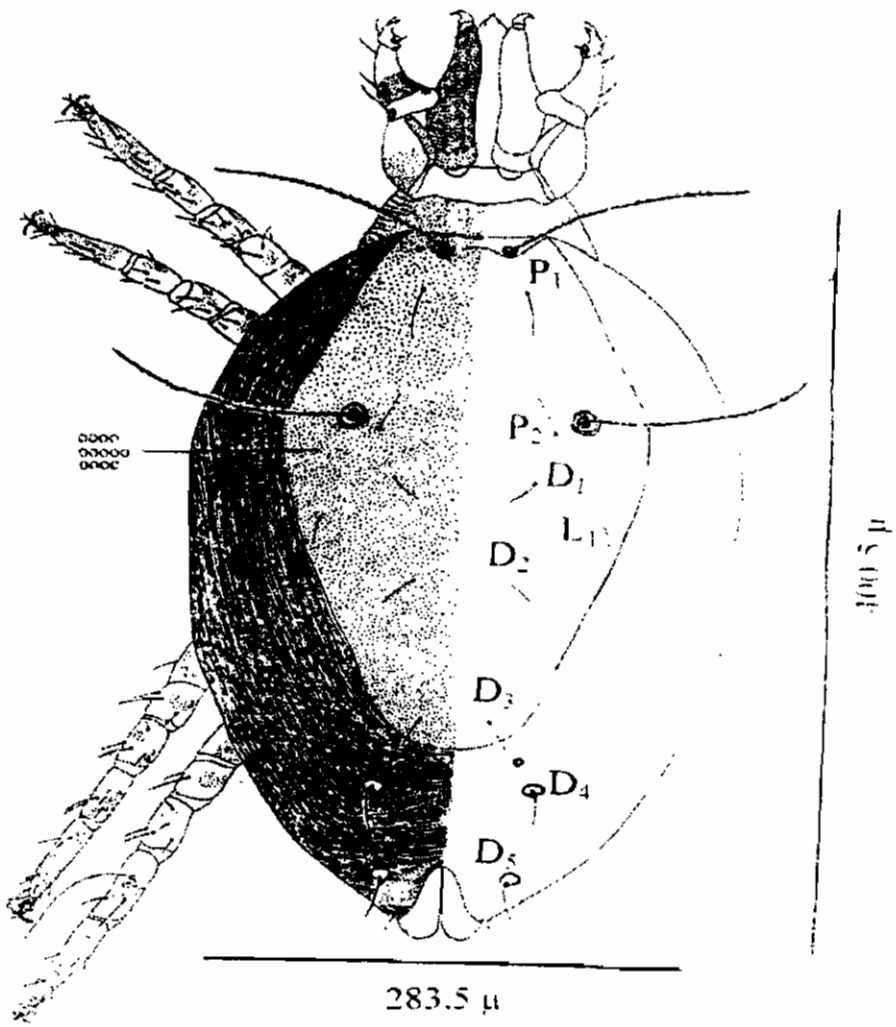
Palpi three segment, length ca. (67.5 µ) long exceeding length of hypostome, including: trochanter, femurogenua and tibiotarsus, chaetotaxy of palpus: trochanter none; femurogenua with two outer lateral simple setae, one dorsal and two ventral simple setae and tibiotarsus with two outer lateral setae: one distally and one medially; one pair of simple seta ventromedialy; inner lateral surface with one basal teeth above it two simple setae; adjacent one mushroom-shaped seta, medially with smaller two tooth; terminating with short, strong claw. Chelicerae elongate, attenuate distally, broadest at base; with strong movable digit Hypostome subrectangular attenuate distally with subcuticular reticulations. Gnathosoma attenuate distally, broadest at base and conspicuously reticulated; venter with three pairs of marginal and one medial pair of simple seta (Fig. 1).



(Fig. 1): Palpi of *N. fayoumi* sp. n.

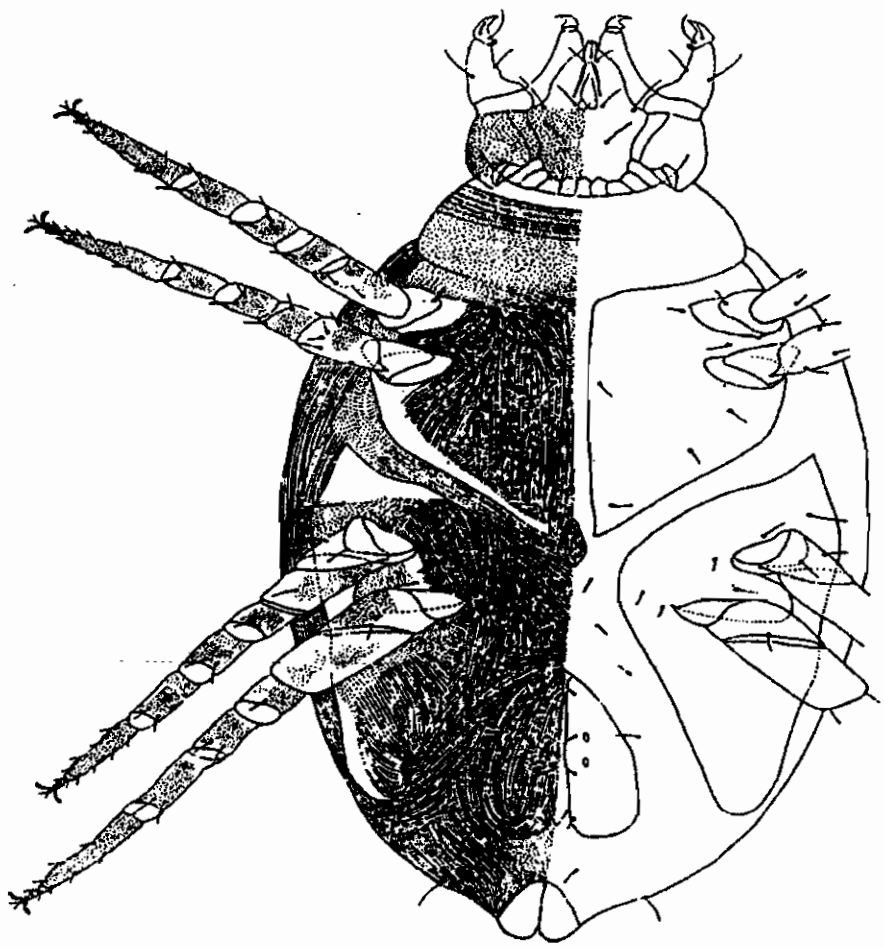
Idiosoma:

Dorsum: Body 400.5 μ in length and 283.5 μ in width. propodosoma with dorsal shield originating on anterior propodosoma and extending posteriorly to metapodosoma, shield with dot like punctuations. Anterior portion with anterior and posterior finely branched sensillae and two pairs of simple setae P_1 (27 μ) and P_2 (22.5 μ); posterior portion of the shield complemented with one lateral setae L_1 (27 μ); three pairs of simple setae D_1-D_3 arising on it, while D_4 (27 μ) and D_5 (27 μ) arising on separated platelets outer the shield. D_4, D_5 and L_1 about equal in length and longer than D_1-D_3 which are equal in length (22.5 μ). P_1 and P_2 not equal in length. (Fig. 2).



(Fig. 2): Dorsal view of adult female of *N. fayoumi* sp. n.

Ventrum: Anterior portion of shield divided medially and forming two distinct striated sternal plates with coxa I-II. Each with six pairs of small simple setae. Coxa III-IV merely coalesced forming two separate, strong, elongate striated lateral plates, each with six pairs of simple setae. One small medial plate adjacent to anterior plates or sternal plates without setae. Hysterosoma with four pairs of simple setae adjacent to lateral and genital plates. Genital plate with four pairs of subequal simple setae and two pairs of disks. All legs segments punctuated, chaetotaxy of legs as following: coxae I-IV, 0-0-0-0; trochanters I-IV, 1-0-2-1; basifemors I-IV, 4-5-2-0; telefemora I-IV, 5-5-4-3; genu I-IV, 8-7-6-7; tibia I, 1 attenuate solenidion plus 6; tibia II, 1 attenuate solenidion plus 5; tibia III, 1 attenuate solenidion plus 5; tibia IV, 1 smooth trichobothrium plus 4; tarsus I, 2 attenuate solenidia plus 21; tarsus II, 1 attenuate solenidion plus 20; tarsus III, 23; tarsus IV, 20 (Fig. 3).



(Fig. 3): Ventral view of adult female of *N. fayoumi* sp. n.

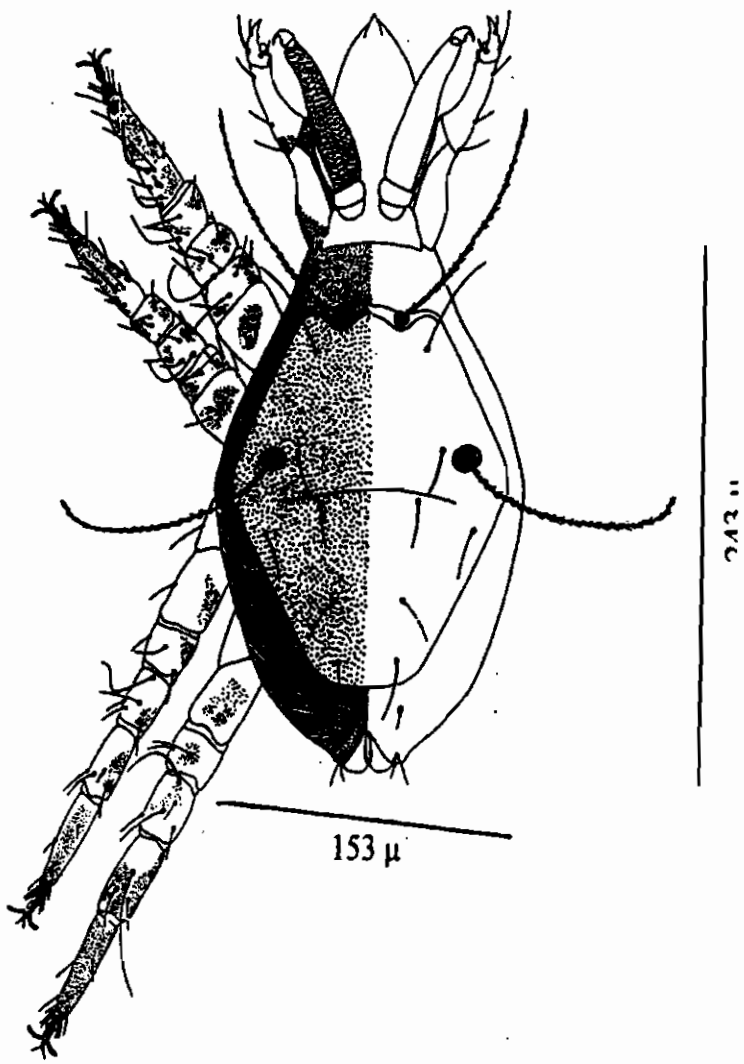
Male:

Gnathosoma:

Is similar to female, but the length of palp is shorter than female Ca (54 μ).

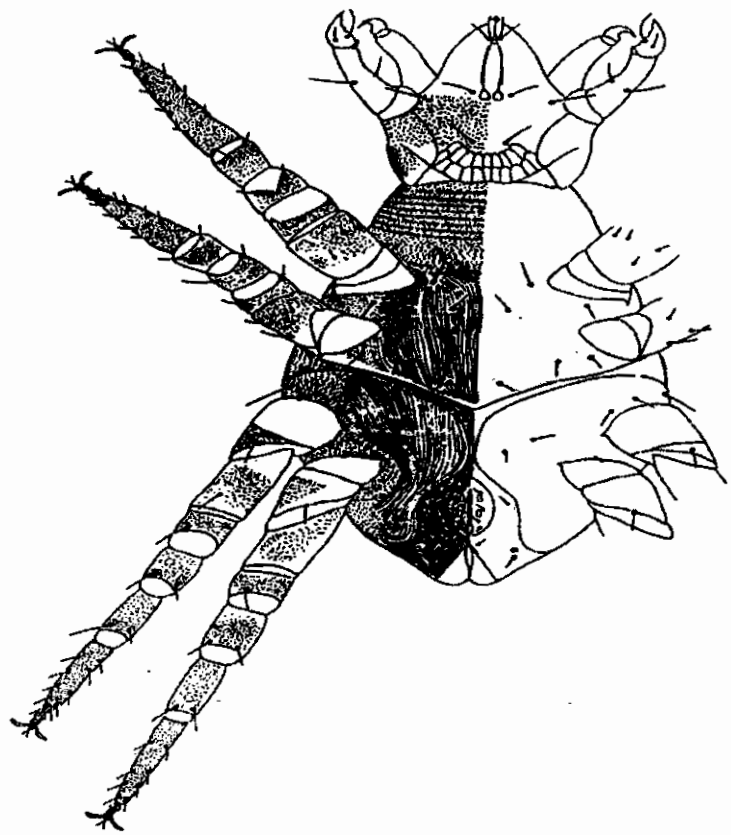
Idiosoma:

Dorsum: Similar to female in having setae D_3 longer than setae D_1 and D_2, but differs in having setae D_3 longer than D_4 and D_5, and smaller than it. Body 243 μ in length and 153 μ in width (Fig. 4).



(Fig. 4): Dorsal view of adult male of *N. fayoumi* sp. n.

Ventrum: Anterior portion of shield forming one distinct striated plate of coxa I-II. Coxa III-IV coalesced forming two separate striated plates. Idiosoma anteroventral plate with six pairs of simple setae, lateral ventral plates each with six pairs of simple setae; with two pairs of simple setae adjacent to lateral and genital plates. Genital plate with four pairs simple setae and two pairs of disks. Segments of legs punctuated, chaetotaxy of legs as following: coxae I-IV; 0-0-0-1; trochanters I-IV, 0-0-2-1; basifemors I-IV, 4-5-2-0; telefemora I-IV, 5-6-4-3; genu I-IV, 8-7-7-7; tibia I, 1 attenuate solenidion plus 6; tibia II, 1 attenuate solenidion plus 5; tibia III, 1 attenuate solenidion plus 5; tibia IV, 1 smooth trichobothrium plus 4; tarsus I, 2 attenuate solenidia plus 22; tarsus II, 1 attenuate solenidion plus 23; tarsus III, 18; tarsus IV, 17 (Fig. 5).



(Fig. 5): Ventral view of adult male of *N. fayoumi* sp. n.

REFERENCES

El-Bishlawy, Shahera, M.O. (1978). Ecological and biological studies on mites associated with weeds, with special reference to lawn grasses. Ph.D. Thesis, Fac. Agric., Cairo Univ.

Inayatullah, M. and M. Shahid (1989). Two new predatory mites of genus *Neocunaxoides* Smiley (Acarina: Cunaxidae) from Pakistan. Pakistan J. Zool., 21: 221-228.

Jianzhen, L.; Z. Yanxuan and J. Jie (2003). A new species of *Neocunaxoides* from Fujian, China (Acari: Cunaxidae). Sys. Appl. Acarol., 8: 101-106.

Smiley, R.L. (1975). Ageneric revision of the mites of the family Cunaxidae (Acarina). Ann. Ent. Soc. Amer., 68: 227-244.

Smiley, R.L. (1992). The predatory mite family Cunaxidae (Acari) of the world, with a new classification. Indira Publishing House, West Bloomfield, MI, USA, 356pp.

نوع جديد تابع لجنس *Neocunaxoides* من عائلة Cunaxidae في مصر

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تم رسم ووصف الطور الكامل لكل من الأنثى والذكر للنوع الجديد *Neocunaxoides fayoumi* sp. n. التابع لعائلة Cunaxidae.

وجدت الأفراد التابعة لهذا النوع بين الأوراق المتساقطة أسفل عديد من أشجار الفاكهة وخاصة أشجار الموالح بمحافظة الفيوم.