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SOME ERIOPHYOID MITES FROM EGYPT WITH
DESCRIPTIONS OF TWO NEW SPECIES
(ACARI : ERIOPHYOIDEA)

BY Badawi A. ABOU-AWAD *

TAXONOMY
ABSTRACT : Two eriophyoid mites, Neooxycenus plucheae sp.n. representing a new genus and Phytoptella niloticus sp. n. are described and illustrated. The first species was found infesting leaves of Pluchea dioscoridis L. (Ploughman’s spikenard) causing rusting symptom; while the second one was noted on Imperata cylindrica (grass). Moreover, three eriophyid species Abacarus hystrix (Nal.), Cisaberoptus kenyae Keifer and Aculus schlechtendali (Nal.) have been firstly recorded in Egypt, infesting Cynodon dactylon (bermuda grass), Mangifera indica (mango) and Malus domestica (apple) respectively.

FAMILY ERIOPHYIDAE Nalepa

SUBFAMILY PHYLLOCOPTINAE Nalepa

Genus Neooxycenus n. gen.

This genus comes close to Oxyegenus Keifer, 1961 in having dorsal tubercles on rear shield margin with setae directed backwards and aside, but can be distinguished by the more broadly dorsal shield, posterior portion of shield narrow and appears as a projection covering the anterior tergites 2-3; tooth-like subdorsal ridges beginning below the dorsal tubercles and fading at the telosome. It is defined as follows:

Robust fusiform flattened dorso-ventrally, with abdominal rings divided into tergites and sternites. Rostrum projecting down. Dorsal

* Plant Protection Laboratory, National Research Centre, Dokki-Cairo, Egypt.
shield oval and more broadly, with prominent anterior lobe, posterior portion narrow and appears as a projection covering the anterior tergites 2-3. Dorsal tubercles on rear shield margin with short posteriorly diverging setae and aside. Tooth-like subdorsal ridges beginning below the dorsal tubercles and running the entire thanosomal length, fading at the telosome. Legs with all standard setae including foretibial seta and featherclaw simple. Coxae with three standard setiferous tubercles; sternal line forked, thanosome with lateral and two pairs of ventral setae; telosomal seta present; accessory seta present. Female genital cover flap with longitudinal ribs.

Genotype: *Neooxyoenus plucheae* n. sp.

**Neooxyoenus plucheae** n. sp.

(Fig. I)

Female. — 123-163 μm long, 55-63 μm wide; robust fusiform; flattened dorso-ventrally, yellow to light amber. Rostrum about 25 μm long, projecting down. Dorsal shield 63 μm long, 54 μm wide, oval, with prominent anterior lobe and slight two shoulders anteriorly, middle portion broad, posterior portion narrow and appears as a projection covering the anterior tergites 2-3. Shield is obscure, with admedian lines incomplete but meeting and forming well defined U-shape. Dorsal tubercles 36 μm apart, moderate in size, on rear margin with posteriorly diverging setae and aside, the seta 7.5 μm long, tubercles connecting with each other by a slight curved line.

Foreleg 29 μm long; femur 9 μm long; genu 4.5 μm long, seta 14 μm long; tibia 7 μm long; seta 4 μm long; tarsus 6 μm long, outside seta about 19 μm long. Claw 7 μm long, strongly knobbled; Axis of featherclaw undivided, 4-rayed on each side. Hindleg 27 μm long; femur 8 μm long; genu 4.5 μm long, seta 4 μm long; tibia 6 μm long, without seta; tarsus 5.5 μm long, outside seta about 19 μm long. Claw 7 μm long, with knob clear at tip. Sternal ridge forked; coxal setae I little further apart than setae II, which located at the end of sternal ridge, posterior coxae contiguous with anterior ones and, with a single seta; seta measuring 43 μm long and arising from obvious tubercle.

Abdomen with about 24 tergites and 48 sternites. Toothlike subdorsal ridges beginning below the dorsal tubercles and running the entire thanosomal length, fading at the telosome; posterior margins of sternites beset with round microtubercles. Lateral thanosomal seta about 7.5 μm long, on about sternite 7; 1st ventral seta 30 μm long, on sternite 16 and surpassing the second ventral seta; 2nd ventral seta 16 μm long, on sternite 29; 3rd or telosomal seta 20 μm long, on about sternite 44. The thanosome with about 19 tergites and 43 sternites. Telson with 5 rings. The last 8 rings with fine striations ventrally. Caudal seta arise from a slight lobe behind the last tergite. Caudal seta about 43 μm long; accessory seta 3 μm long. Female genitalia 14 μm long, 19 μm wide, with 8 irregular longitudinal markings; genital seta 9 μm long.

**Male.** — not seen on slides.

Type locality: Kafr El-Sheikh, Collected April, 24 1979; Host: *Pluchea dioscoridis* L. Ploughman's spikenard (Compositae); Relation to host: Leaf vagrants, preferring the lower surfaces and causing rusting symptoms. Type material: A holotype slide and paratype slides kept in the collection of Plant protection Department, National Research Centre, Dokki, Cairo, Egypt.

**Family Sierraphytoptidae** Keifer, 1944

Subfamily Phytocoptellinae

Newkirk and Keifer, 1971

**Phytocoptella niloticus** n. sp.

(Fig. 2)

This is the first record of this family and genus from Egypt. The species bears some
**Fig. 1:** *Neoxyenus plucheae*, a new genus and species.

SA-side view of anterior section of mite; DA-dorsal view of anterior section of shield; F-featherclaw; D-dorsal view of mite; V-ventral view of mite; ES-side skin structure GFI-female genitalia and anterior section of mite.
FIG. 2: *Pythocoptella niloticus* sp. n.

DA-dorsal view of anterior section of shield; F-featherclaw; D-dorsal view of mite; V-ventral view of mite; ES-side skin structure; GFI-female genitalia and anterior section of mite.
resemblance to *Phytocoptella rufensis* (Manson = *Phytoptus rufensis* M., 1970) mainly in the direction of shield setae, but is separated from it by having dorsal shield obscure; lateral seta surpassing the 1st ventral seta; 1st ventral seta surpassing the 2nd ventral seta; microtubercles located in sinuated annular rings.

**Female.** — 257.5-272.5 μm long, 47.5-60 μm wide; elongate wormlike and whitish. Rostrum about 24 μm long, curved downwards. Shield 36 μm long, 52 μm wide, obscure. Anterior shield setae 27 μm apart, 18 μm long, projecting forwards. Dorsal tubercles 22 μm apart, set a little ahead of the rear margin, the setae 16 μm long, projecting posteriorly; subdorsal abdominal seta 123 μm long.

Forelegs 33 μm long; femur and genu fused, 14 μm long, seta of genu 33 μm long; tibia 8 μm long, with one short seta (3 μm long) and lateral foretibial spur; tarsus 8 μm long, outside seta about 30 μm long. Claw 9 μm long, with knob clear at tip. Axis of featherclaw undivided, 6-rayed on each side (in some individuals 6-rayed on one side and 5-rayed on the other). Hindlegs 31 μm long; femur and genu fused, 12 μm long, seta of genu 33 μm long; tibia 8 μm long, without setae; tarsus 8 μm long, outside seta about 30 μm long. Claw 9 μm long, with clear knob at tip. Sternum with a double. Posterior coxae contiguous with anterior ones, and each with single seta; seta of second coxa 59 μm long. All coxae without dots or granules.

Abdomen with about 92 rings. Rings completely microtuberculate, except for the last 14 rings, 6 being partly microtuberculate and the posterior 8 rings completely devoid of microtubercles dorsally. Microtubercles similar in all areas, ovoid, and located in sinuated annular rings. Lateral seta 58 μm long, on about ring 12, surpassing the 1st ventral seta; 1st ventral seta 62 μm long, on ring 30, surpassing the 2nd ventral seta; 2nd ventral seta 13 μm long, on ring 50; 3rd or telosomal seta 60 μm long, on about ring 80. The thanosome with about 79 rings dorsally and ventrally. Telosome with about 13 rings with microstriations ventrally. Caudal seta about 105 μm long; accessory seta 5 μm long. Genitalia 25 μm wide, 16 μm long and without longitudinal scorelines. Genital seta 21 μm long.

**Male.** — not seen on slides.

Type locality: El-Qualiubiya (Lower Egypt). Collected April 18, 1979.

Host: *Imperata cylindrica*, (grass).

Relation to host: Living in the leaves and no symptoms of attack were noticed.

Type material: A holotype slide and paratype slides kept in the collection of Plant Protection Department, National Research Centre, Dokki, Cairo, Egypt.

The following species of eriophyid mites are recorded in Egypt for the first time:

*Abacarus histrix* (Nal.)

This genus is recorded in Egypt for the first time. *A. histrix* is known as the cereal rust mite. It may be recognized by its fusiform shape; whitish in colour and 8-rayed featherclaw.

Female 185 μm long including rostrum, 55 μm wide. Shield 44 μm long, 47 μm wide, subtriangular, with anterior lobe over rostrum. The dorsal longitudinal ridges that bear wax in the form of strips; tergites about as numerous as sternites; sternites 80. Female genitalia, 23 μm wide, 15 μm long, cover flap with about 14 furrows.

This species was collected on May 25, 1979 in Giza from *Cynodon dactylon* (bermuda grass). The mites live in the upper surface furrows of the leaves, no apparent damage was noticed.

*Aculus schlechtendali* (Nal.)

Named the apple rust mite. This species (= *Aculus malivagrans* K.) is characterized by its
fusiform shape. Yellowish in colour and 4-rayed featherclaw.

Female 192.5 μm long including rostrum, 75 μm wide. Shield 51 μm long, 72 μm wide; design of curved lines represented by tubercles; laterally with sparse granulations. Abdomen with tergites about half as numerous as sternites; about 30 tergites; 60 sternites. Female genitalia 23 μm wide, 15 μm long; coverflap with 8 longitudinal furrows.

This species was collected on June 11, 1979 in El-fayum from *Malus domestica* (apple). The mite was noticed infesting leaves preferring the lower surfaces and causing russetting appearance.

*Cisaberoptus kenyae* Keifer

This genus is recorded in Egypt for the first time. *C. kenyae* is known as the mango leaf-coating mite. It may be recognized by its flattened fusiform; light yellowish colour and about 17-rayed featherclaw.

Female 187.5 μm long including rostrum, 56 μm wide. Shield 35 μm long, 53 μm wide; short bilobed projection over chelicera base.

No shield design. Thanosome with about 46 rings. Telosome of 6 rings. Accessory seta absent. Female genitalia 16 μm long, 28 μm wide; coverflap with 16-18 curved ribs.

Specimens of this mite were collected on October 27, 1979 in Giza; from *Mangifera indica* (mango). It was noted on the lower leaf surfaces, causing white leaf coating which is thought to be some sort of regurgitation.

REFERENCES


*Paru en Décembre 1981.*