

ERYNGIOPUS CITRI, A NEW MITE ON FLORIDA CITRUS  
WITH DESCRIPTIONS OF THE DEVELOPMENTAL  
STAGES (STIGMAEIDAE: ACTINEDIDA)

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ABSTRACT

A new stigmaeid mite, *Eryngiopus citri*, n. sp., was recorded inhabiting citrus trees in Lake Alfred, Florida. Descriptions of developmental stages are included.

RESUMEN

*Eryngiopus citri*, n. sp., fue reportado en arboles cítricos en Lake Alfred, Florida. Se incluyen descripciones de sus etapas de desarrollo.

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Members of the mite family Stigmaeidae are known for their predatory behavior. Some species of the genera *Zetzellia*, *Agistemus*, and *Mediolata* were reported to feed on spider mites in North America and Europe (Krantz 1978). Summers (1964) created the stigmaeid mite genus *Eryngiopus*, which is distinguished by its slender idiosoma, reduced plates, and the presence on the propodosoma of one or a pair of subtle sclerites. Four new species, *E. gracilis*, *E. microsetus*, *E. vagantis*, and *E. longurius*, were described and recorded from willow bark, leaf mold, a prune orchard, and salt grass, respectively. A revision of the stigmaeid genera, including designation of dorsal plates and dorsal setae and a key to the 14 genera was presented by Summers (1966). In a survey of New Zealand stigmaeid mites, Wood (1967) recorded 3 new species: *E. arboreus* from *Nothofagus* and *Olearia*, *E. bifidus* from bark of *Leptospermum*, and *E. similis* from moss. Meyer (1969) revised the distribution, classification, and external morphology of 16 South African species and described *Eryngiopus discus*, *E. bidens*, and *E. lindei* from grass, an unidentified wild plant, and *Clifortia strobilifera*, respectively. Muma (1975) recorded 9 stigmaeid species representing 5 genera: (*Agistemus*, *Eryngiopus*, *Ledermeulleria*, *Stigmaeus*, and *Zetzellia*) on Florida citrus.

A new species of *Eryngiopus* was discovered on citrus foliage, where it was feeding on eggs of *Tydeus mumai* Baker, and depositing spherical orange eggs on new leaves and bark. Descriptions of the female, male, and immature stages are presented herein.

*Eryngiopus* SUMMERS

*Eryngiopus* is distinguished by the reduction of all dorsal sclerites, except for the propodosomal and suranal plates. Dorsum with 13 pairs of relatively short setae. Subcapitular and intercoxal setae may be ultra-long. Empodial shaft short. The terminal sensillum of palp tarsus may be bidentate or a single spine.

*Eryngiopus citri* Rakha and McCoy, NEW SPECIES

**DIAGNOSIS:** This species is distinguished by having a reticulated propodosomatic plate and a pair of intercalary platelets on which setae li are inserted. The palp tarsal sensillum is a single spine. This species differs from *E. vagantis* in having a different setal formula on coxae 2-1-2-1 and femora 4-4-2-2.

**FEMALE** (Fig. 1A, B, C).—Small mites, orange gnathosoma 104  $\mu\text{m}$  long, palp tarsus with single spine-like sensillum. Palp chaetotaxy: femur 2, genu 1, tibia 3, and tarsus 6. Palp coxa dorsally with rod-like sensillum. Idiosoma 311  $\mu\text{m}$  long, 202  $\mu\text{m}$  wide. Propodosoma with 4 pairs of setae surrounding a reticulated propodosomal plate. One pair of eyes is located behind seta (be). The area above the setae is punctate. Hysterosoma with 9 pairs of setose setae. Setae (he) and (li) are situated on transverse striations while others are on longitudinal striae. Seta (li), (le, e) on platelets. Median hysterosomatic striae with microtubercles. Venter with 3 pairs of intercoxal setae, the first pair being longest. Three pairs of paragenital setae in 2 rows. The genitoanal valves bear 3 pairs of setae. **LEGS:** The chaetotaxy of legs, including sensilla, is: coxae 2-1-2-1, trochanters 1-1-1-1, femora 4-4-2-2, genua 2-0-0-0, tibiae 6-6-6-6, tarsi 9-8-7-6.

**MALE** (Fig. 2A, B, C, D).—Resembles female but differs in leg tarsal chaetotaxy (Table 1) and is smaller in size: gnathosoma 81  $\mu\text{m}$  in length, idiosoma 230  $\mu\text{m}$  long and 127  $\mu\text{m}$  wide. Aedeagus extends to the margin of coxae IV, with a strongly curved tip.

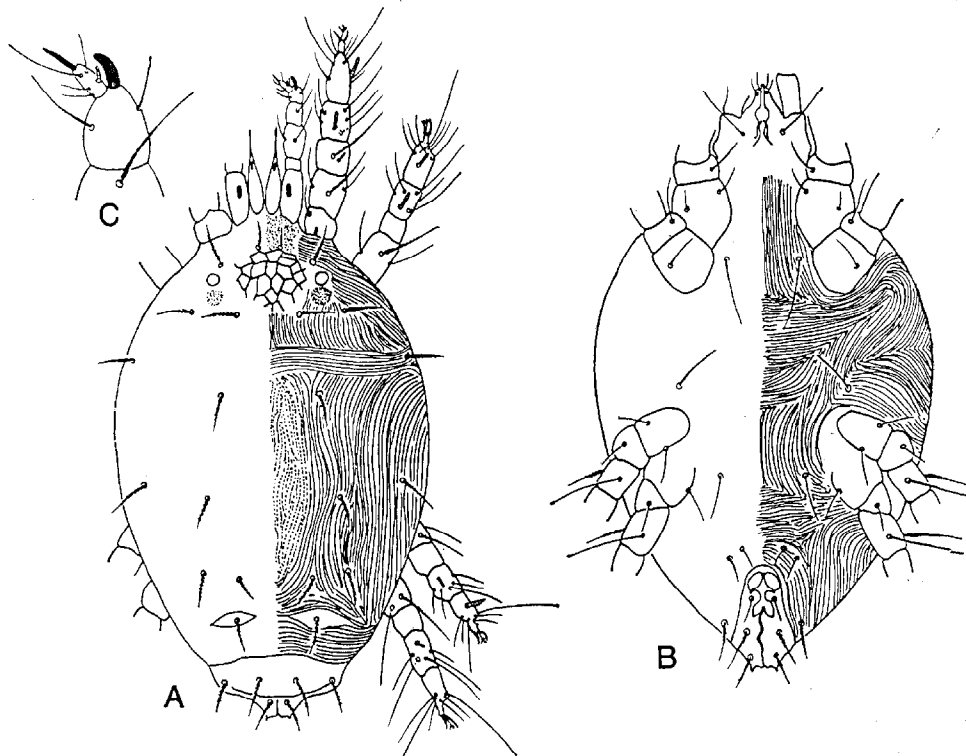


Fig. 1. *Eryngiopus citri* Rakha and McCoy, n. sp. ♀. A. Female dorsum, B. Venter, C. Palp tarsus.

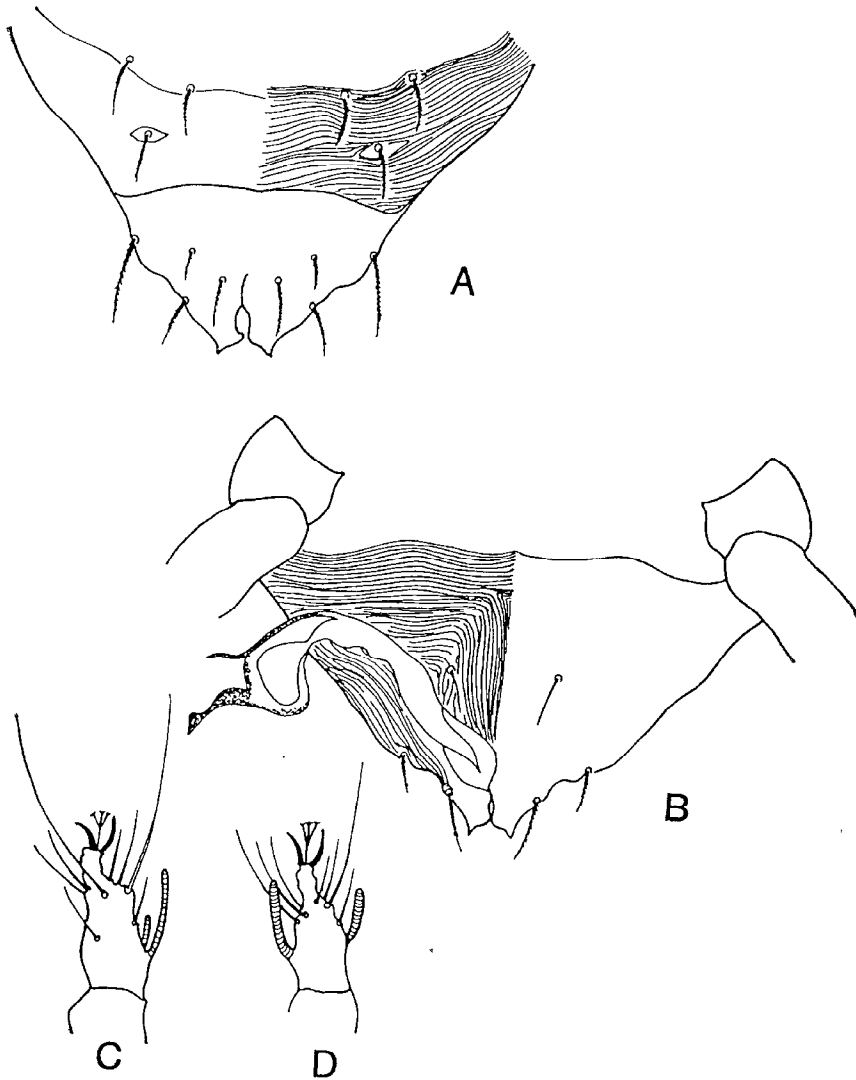


Fig. 2. *Eryngiopus citri* Rakha and McCoy, n. sp., ♂. A. Opisthosoma dorsum, B. Opisthosoma ventrum, C. Tarsus Leg I, D. Tarsus Leg II.

DEVELOPMENTAL STAGES. Smaller than adults, larvae and protonymphs with 2 pairs of intercoxal setae. Leg chaetotaxy differs in larvae and protonymphs, coxae 1-0-0, 2-1-2-0; trochanters 0-0-0, 0-0-0-0; femora 4-4-2, 4-4-2-1; genua 1-0-0, 2-0-0-0; tibiae 6-6-6, 6-6-6-6; tarsi 9-8-7, 9-8-7-6, respectively. Deutonymphs with the same chaetotaxy as adult female (Table 1).

TYPES: Holotype ♀, Florida Lake Alfred, 25-VII-1983 (M. A. Rakha), (FSCA).

Allotype ♂ (same data).

Paratypes: 2 ♂, 3 ♀ and developmental stages (same data) (Plant Protection Research Institute, Dokki, Giza, Egypt).

TABLE 1. *Eryngiopus citri* DEVELOPMENTAL STAGES, MEASUREMENTS AND CHAETOTAXY.

	Larva	Proto-nymph	Deuto-nymph	Adult Female	Adult Male
Measurements ( $\mu\text{m}$ )					
Gnathosoma	640	710	970	104	810
Idiosoma					
Lenth	196	228	289	311	230
Width	115	131	156	202	127
Chaetotaxy					
Idiosoma dorsum	13	13	13	13	13
Idiosoma ventrum	2	2	3	3	3
Genitoanal setae	3	3 + 1	3 + 3	3 + 3	
Palp					
Tarsus	6	6	6	6	6
Tibia	3	3	3	3	3
Genu	1	1	1	1	1
Femur	2	2	2	2	2
Legs I-IV					
Coxae	1-0-0	2-1-2-0	2-1-2-1	2-1-2-1	2-1-2-1
Trochanters	0-0-0	0-0-0-0	1-1-1-1	1-1-1-1	1-1-1-1
Femora	4-4-2	4-4-2-1	4-4-2-2	4-4-2-2	4-4-2-2
Genua	1-0-0	2-0-0-0	2-0-0-0	2-0-0-0	2-0-0-0
Tibiae	6-6-6	6-6-6-6	6-6-6-6	6-6-6-6	6-6-6-6
Tarsi	9-8-7	9-8-7-6	9-8-7-6	9-8-7-6	10-9-7-6

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