TWO NEW SPECIES OF PHYTOSEIID MITES FROM WISCONSIN APPLE ORCHARDS (MESOSTIGMATA: PHYTOSEIIDAE)¹

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ABSTRACT

Two new species of phytoseiid mites, Proprioseiopsis marginatus and Amblyseius oatmani, collected from soil-duff in a Wisconsin apple orchard during an ecological study, are described.

Phytoseiid mites are found in most terrestrial ecosystems and often contribute to the natural control of insects and/or mites associated with the ecosystem (Muma 1964, 1970, 1971, and Muma, et al. 1961). During an ecological study of apple orchards in Wisconsin, Dr. Earl R. Oatman collected the mites and sent them to me for identification. From this collection 2 new species are described. Holotypes are deposited in the Florida State Collection of Arthropods (FSCA), Doyle Conner Building, Gainesville, Florida.

Genus Proprioseiopsis Muma

Proprioseiopsis Muma 1961: 277 (Type only); Muma and Denmark 1968: 231. Type: Typhlodromus (Amblyseius) terrestris Chant 1959, by original designation (Muma 1961).

Proprioseiopsis marginatus Denmark, new species

Fig. 1-6

Diagnosis: P. marginatus is near P. exopodalis (Kennett) but smaller in size, more heavily reticulated, spermatheca shorter, pores on ventrianal scutum spaced further apart and more posteriorly, and a reduced number of denticules on fixed finger.

Female: Length 314μ; width at L₁ 264μ. Dorsal scutum reticulated with 5 pairs of pores and 16 pairs of dorsal setae. Measurements of setae: verticals 20μ; D₁ and D₂ 6μ, D₃ 14μ; clunals 11μ; L₃ 39μ, L₄ 25μ, L₅ 17μ, L₆ 72μ, L₇ 20μ, L₈ 20μ, L₉ 22μ, L₁₀ 91μ; M₁ 4μ, M₂ 19μ, M₃ 90μ; anterior sublaterals 30μ; posterior sublaterals 20μ. Spermatheca reticulated, wider than long and concave. Peritreme extends forward to between L₉ and L₁₀. Leg formula 1432. Macrosetae present on leg IV only. Length of macrosetae: Sge IV 52μ, Sti IV 44μ, St IV 17μ. Genu II 3, 2, 2, 1; genu III 1, 1, 2, 1. Spermapheca saccular.

Male: Smaller than female, sublateral setae on the dorsal scutum. Ventrianal scutum reticulated, with 3 pairs of setae. The spermatodactyl with heel terminal and crest membranous.

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Fig. 1-6. Female Proprioseiopsis marginatus Denmark new species. 1) dorsal and leg structure and setation; 2) ventral scuta and setation; 3) posterior peritremal and stigmatal development; 4) spermathecal structure; 5) male spermatodactyl structure; 6) male ventrianal scutum.

TYPE: Female holotype from Door County, Wisconsin, 10-VIII-1962, E. Oatman, in soil-duff under apple trees (FSCA). A female paratype was collected in Door County, Wisconsin, 7-IX-1962, E. Oatman, in soil-duff under apple trees.

Nothing is known about the food habits of this mite.

Genus Amblyseius Berlese, 1914

Amblyseius 1914: 143. Type of the genus: Zercon abtusus Koch 1839 by indication of Berlese (1914).
Amblyseius, Muma, Denmark, and De Leon 1971: 72.

Amblyseius oatmani Denmark, new species

Fig. 7-12

DIAGNOSIS: A. oatmani is near A. multidentatus (Chant) but differs in
location of the preanal pores on the ventrianal scutum and long saccular spermatheca rather than short saccular spermatheca as in multidentatus.

**FEMALE:** Length 314 μ; width at L, 212 μ. Dorsal scutum smooth with 3 pairs of pores and 17 pairs of dorsal setae. Measurements of setae: verticals 27 μ; D, D, and D, 6 μ; D, 8 μ; clunals 11 μ; L, 52 μ; L, 9 μ; L, 11 μ; L, 83 μ; L, 11 μ; L, and L, 11 μ; L, 234 μ; M, 6 μ; M, 7 μ; M, 115 μ; anterior sublaterals 13 μ; posterior sublaterals 11 μ. Sternal scutum slightly creased, about as wide as long, concave with 2 pairs of pores and 3 pairs of setae. Peritreme extending forward between L, and L,; Leg formula 4123. Macrosetae present on Sge I, Sge II, Sge III, Sge IV, Sti IV, and St. IV.

**MALE:** Smaller than female with sublateral setae on dorsal scutum. Ventrianal scutum with 3 pairs of preanal setae and a pair of preanal pores. Spermatoptactyl with heel terminal.

**TYPE:** Female holotype from Door County, Wisconsin, 13-VII-1962, E. Oatman, in soil-duff under apple trees, (FSCA). The allotype and 2 female paratypes were collected with the holotype. Paratypes with same data as holotype except: 2 males, 15-VI-1962; 2 females, 10-VIII-1962; 2 females, 7-IX-1962; 2 females, 27-VIII-1962.

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**Fig. 7-12.** Female *Amblyseius marginatus* Denmark new species. 1) dorsal leg structure and setation; 2) ventral scuta and setation; 3) posterior peritremal and stigmatal development; 4) spermathecal structure; 5) male spermatoptactyl structure; 6) male ventrianal scutum.
LITERATURE CITED


CHAROPS ANNULIPES ASHMEAD (HYMENOPTERA: ICHNEUMONIDAE; PORIZONTINAE) FOUND IN FLORIDA.

(Note.) A single male specimen of C. annulipes was collected 14 May 1970 at Torreya State Park near Bristol, Liberty County, Florida. This is the southern-most record for this species and the first record of its occurrence in Florida. Ashmead (Proc. U. S. Nat. Mus., 1890, 7:387) originally described C. annulipes from Missouri. Subsequently it was reported from Maryland and Virginia (H. Townes, In C. F. W. Muesebeck et al., Synoptic Catalogue, USDA Monogr., 1951, 2:366), and Delaware (L. Walkley, In K. V. Krombein et al., Synoptic Catalogue, USDA Monogr., 1967, 2, 2nd suppl.:202). Its known hosts include Tarachidia erastioides (Guenee) (Townes, ibid.) and the green cloverworm, Plathypena seabra (Fabricius) (Walkley, ibid.), both noctuid moths which have been reported from Florida (C. P. Kimball, Arthropods of Florida and neighboring land areas, Fla. Dep. Agr., Div. Plant Ind., 1965, 1, 363 p). The specimen was determined by the author and is deposited in the Florida State Collection of Arthropods at Gainesville. H. N. Greenbaum, Univ. of Florida, Gainesville, 32611.