

**TWO NEW SPECIES OF *TYPHLODROMUS*  
(ACARI : PHYTOSEIIDAE) FROM NORTH AFRICA\***

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**ABSTRACT**

Two new species of phytoseiids, *Typhlodromus swirskii* Denmark n. sp. and *Typhlodromus moroccoensis* Denmark n. sp., are described from North Africa. *Typhlodromus pritchardi* Arutunjan is redescribed and illustrated.

KEY WORDS: Phytoseiidae, North Africa, *Typhlodromus swirskii* n. sp., *Typhlodromus moroccoensis* n. sp.

**INTRODUCTION**

Two new species of phytoseiids are described from North Africa. These are *Typhlodromus swirskii* Denmark n. sp. and *Typhlodromus moroccoensis* Denmark n. sp. *Typhlodromus pritchardi* Arutunjan is redescribed and redrawn and it is compared with *Typhlodromus swirskii* Denmark n. sp. These two new species add to our knowledge of the growing number of phytoseiids that may eventually contribute to the available species of mites to be used in the biological control of phytophagous mites and other small arthropods. Type specimens are deposited in the Florida State Collection of Arthropods (FSCA). All measurements are in microns.

Genus *Typhlodromus* Scheuten

*Typhlodromus* Scheuten, 1857:111.

Type-species: *Typhlodromus pyri* Scheuten, 1857, by subsequent designation of Oudemans, 1929.

*Typhlodromus pritchardi* Arutunjan

(Figs. 1-5)

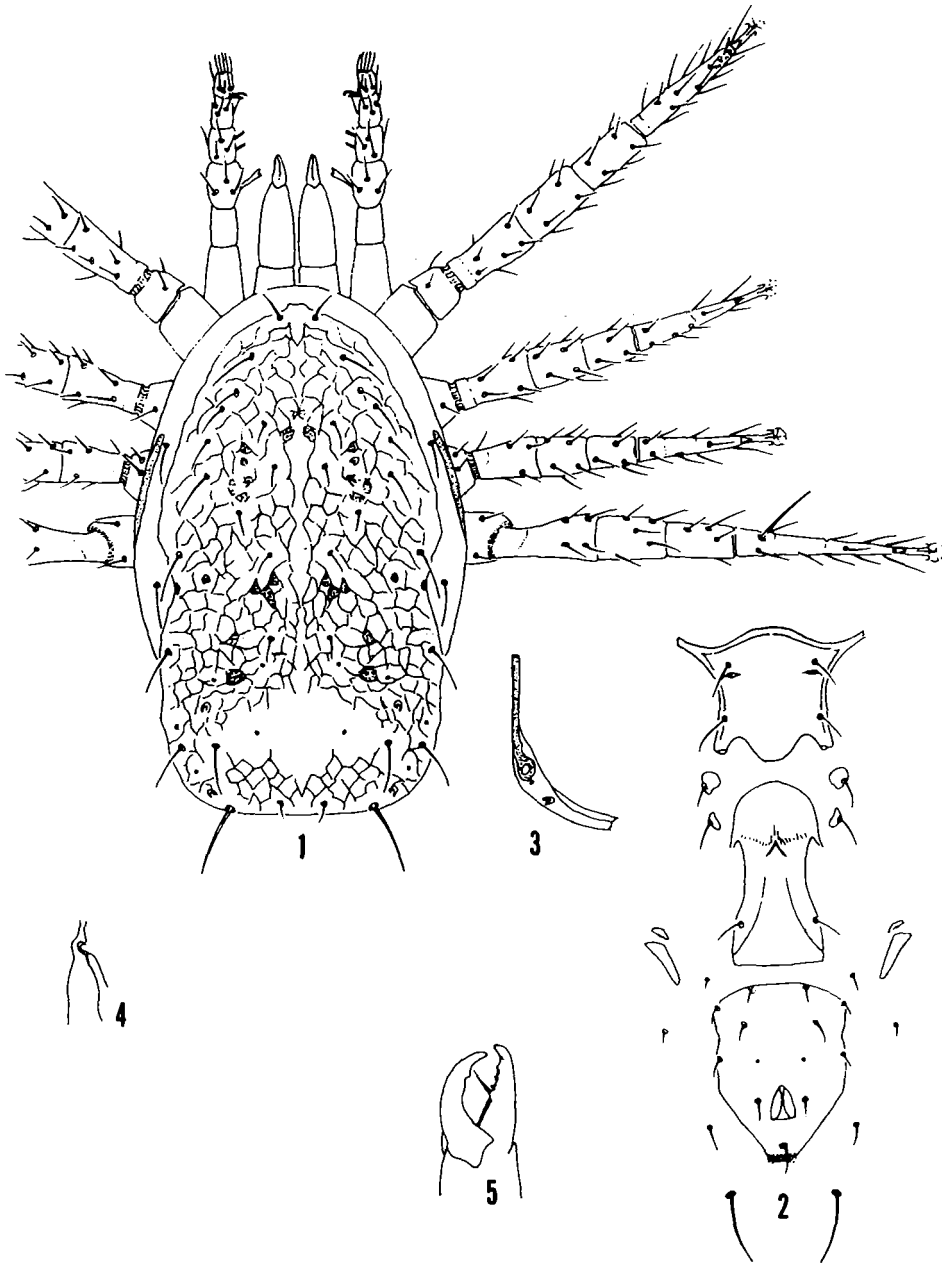
*Typhlodromus pritchardi* Arutunjan, 1971:306; 1977:45; Wainstein, 1975:138; Chant and

Yoshida-Shaul, 1987:1771; Moraes et al., 1986:246.

TYPE. Female holotype, U.S.S.R.: Kirantsa, Idzhevan, Armenia, on *Fragaria* sp.

DIAGNOSIS. *Typhlodromus pritchardi* Arutunjan is similar to *Typhlodromus swirskii* Denmark n. sp. but differs in having 3 macrosetae on leg IV, setae M<sub>2</sub> and L<sub>9</sub> smooth, and peritreme extending anteriorly to level of L<sub>4</sub> as opposed to 1 macroseta on leg IV, setae M<sub>2</sub> and L<sub>9</sub> serrate, and peritreme extending anteriorly to level of verticals in *T. swirskii*.

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Figs. 1–5. *Typhlodromus pritchardi* Arutunjan: 1. Dorsal and leg structure of female. 2. Ventral scuta and setation of female. 3. Posterior peritremal and stigmatal development of female. 4. Spermathecal structure of female. 5. Cheliceral structure of female.

**Female**

Length 392-405; width at L<sub>5</sub> 192-201. Dorsal scutum reticulated with 4 large pores, 4 or more small pores, scattered muscle marks, and 17 pairs of setae. Measurements of setae: verticals 27; D<sub>1</sub> 15-16, D<sub>2</sub> 14-15, D<sub>3</sub> 18-19, D<sub>4</sub> 21; clunals 8; L<sub>1</sub> 33, L<sub>2</sub> 15-17, L<sub>3</sub> 28-30, L<sub>4</sub> 24-25, L<sub>5</sub> 31-36, L<sub>6</sub> 31-36, L<sub>7</sub> 36-39, L<sub>8</sub> 38-39, L<sub>9</sub> 53-60; M<sub>1</sub> 18, M<sub>2</sub> 33-37; anterior sublaterals 29; posterior sublaterals 33. Sternal scutum smooth with 2 pairs of pores and 2 pairs of setae. Ventrianal scutum smooth with a pair of small round pores, 4 pairs of preanal setae, and 3 pairs of ventrolateral setae. Peritreme extending anteriorly to the level of L<sub>4</sub>. Chelicerae normal in relation to body size, fixed digit with 4 denticules and movable digit with 2 denticules. Leg formula 1423. Macroseta Sge IV 27, Sti IV 29, St IV 35. Genu II 2-2-2/0-1; genu III 1-2/1-2/0-1. Spermatheca with saccular cervix 16 and c-shaped atrium.

**Male**

Unknown.

DISCUSSION. This species is known from the type specimen on *Fragaria* sp. Kolodochka (1981) reported it from the U.S.S.R., Crimea, on *Pinus* sp., *Primula vulgaris*, and *Prunus spinosa*; Wainstein (1971) reported it from the Yaroslave Province on herb, linden, and mountain ash. Nothing is known about the life history and biology of this species.

***Typhlodromus swirskii* Denmark n. sp.**

(Figs. 6-9)

TYPE. Female holotype, Egypt: Giza. 9.x.1978, M.A. Zaher, on mango leaves in FSCA.

DIAGNOSIS. See *Typhlodromus pritchardi* Arutunjan.

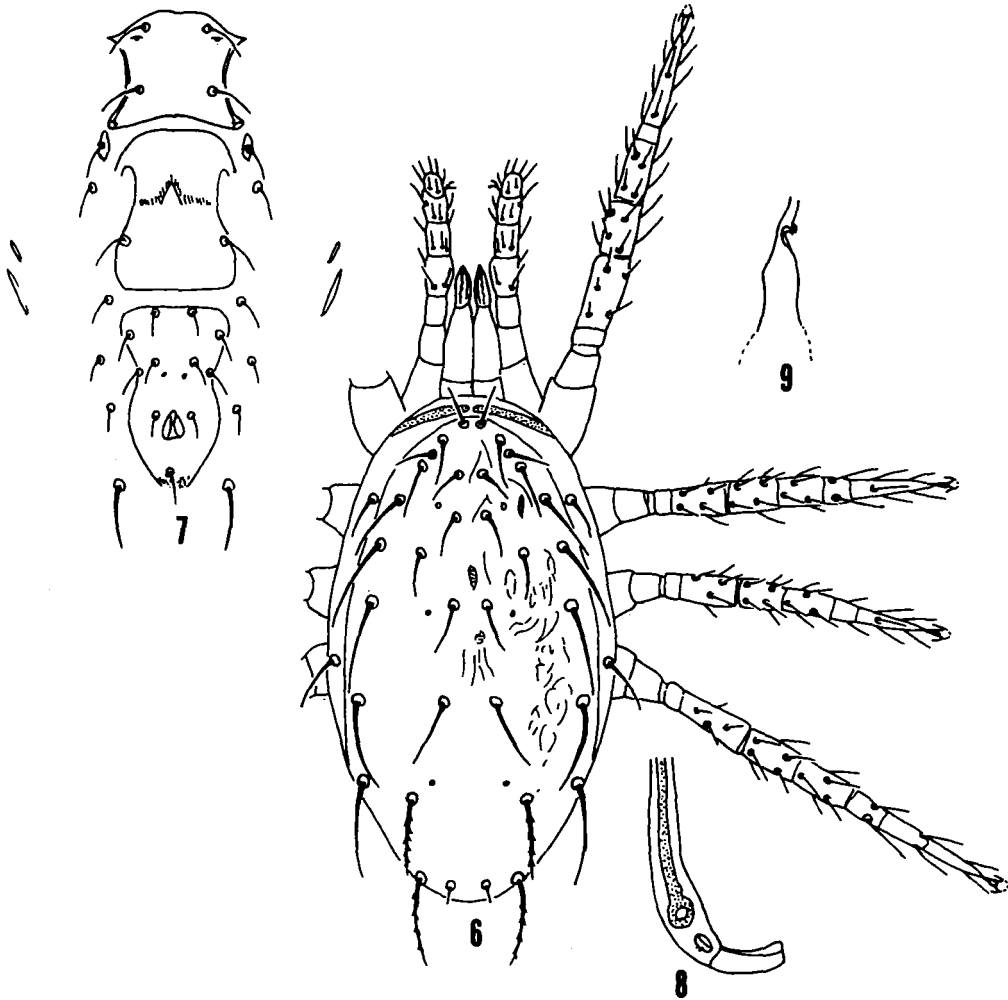
**Female**

Length 331; width at L<sub>5</sub> 160. Dorsal scutum reticulated from D<sub>1</sub> to D<sub>4</sub>, 4 medium size pores, and 17 pairs of setae. Measurements of setae: verticals 27; D<sub>1</sub> 25, D<sub>2</sub> 27, D<sub>3</sub> 39, D<sub>4</sub> 49; clunals 10; L<sub>1</sub> 33, L<sub>2</sub> 27, L<sub>3</sub> 39, L<sub>4</sub> 35, L<sub>5</sub> 45, L<sub>6</sub> 57, L<sub>7</sub> 63, L<sub>8</sub> 68, L<sub>9</sub> 60; M<sub>1</sub> 27, M<sub>2</sub> 55; anterior sublaterals 34; posterior sublaterals 36. Sternal scutum smooth with 2 pairs of pores and 2 pairs of setae. Ventrianal scutum smooth with a pair of small round pores, 4 pairs of preanal setae, and 3 pairs of ventrolateral setae. Peritreme extending anteriorly to the verticals. Chelicerae normal in relation to body size, but I was unable to see the denticules on the digits as they were not positioned correctly. Leg formula 4123. Macroseta St IV 34. Genu II 2-2-2/0-1; genu III 1-2/1-2/0-1. Spermatheca with saccular cervix 13 and c-shaped atrium.

**Male**

Unknown.

DISCUSSION. This species is known from the type specimen. Nothing is known about the life history and biology of this species. It is named in honor of Professor Eliahu Swirski in commemoration of his 70th birthday and his contributions to acarology.



Figs. 6-9. *Typhlodromus swirski* Denmark n. sp.: 6. Dorsal and leg structure of female. 7. Ventral scuta and setation of female. 8. Posterior peritremal and stigmatal development of female. 9. Spermathecal structure of female.

*Typhlodromus moroccoensis* Denmark n. sp.

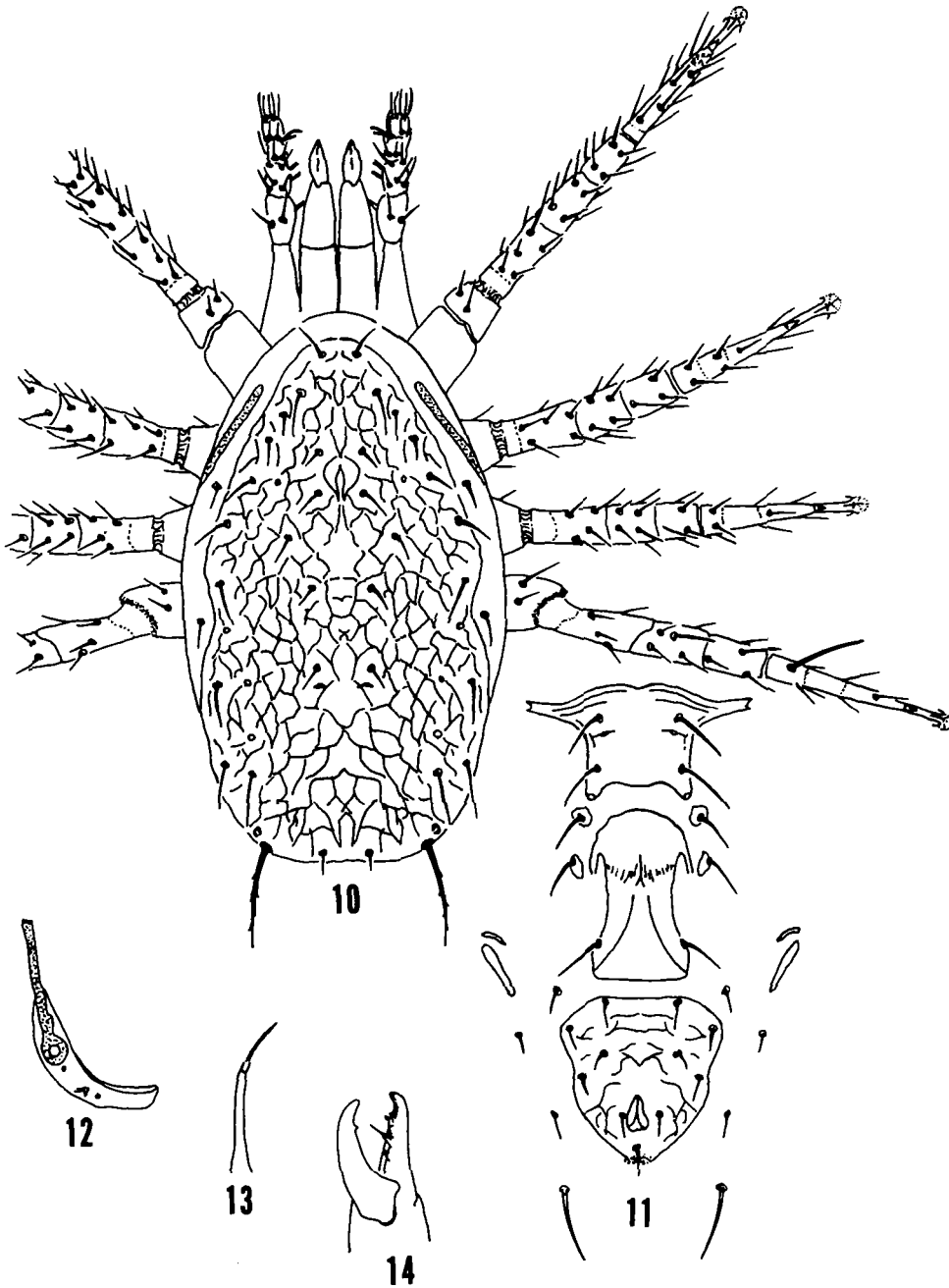
(Figs. 10-14)

TYPE. Female holotype, Morocco: Debdou, 2.iv.1973, F.S. Saba, on *Prunus* sp. in FSCA.

DIAGNOSIS. *Typhlodromus moroccoensis* Denmark n. sp. is distinct from other known species of *Typhlodromus* in its combination of characters: tubular-fundibular cervix, 3 macrosetae on leg IV, 4 medium size pores on the dorsal scutum, 2 pairs of ventral setae, and 4 pairs of preanal setae.

**Female**

Length 330; width at L<sub>5</sub> 176. Dorsal scutum reticulated, 4 medium size pores, and 17 pairs of



Figs. 10-14. *Typhlodromus moroccoensis* Denmark n. sp.: 10. Dorsal and leg structure of female. 11. Ventral scuta and setation of female. 12. Posterior peritremal and stigmatal development of female. 13. Spermathecal structure of female. 14. Cheliceral structure of female.

setae. Measurements of setae: verticals 27; D<sub>1</sub> 15, D<sub>2</sub> 14, D<sub>3</sub> 16, D<sub>4</sub> 19; clunals 4; L<sub>1</sub> 27, L<sub>2</sub> 17, L<sub>3</sub> 19, L<sub>4</sub> 19, L<sub>5</sub> 24, L<sub>6</sub> 29, L<sub>7</sub> 32, L<sub>8</sub> 32, L<sub>9</sub> 62; M<sub>1</sub> 17, M<sub>2</sub> 42; anterior sublaterals 25; posterior sublaterals 25. Sternal scutum smooth with 2 pairs of pores and 2 pairs of setae. Ventrianal scutum lightly creased with 4 pairs of preanal setae and 3 pairs of ventrolateral setae. Peritreme extending anteriorly to the level of L<sub>1</sub>. Chelicerae normal in relation to body size, fixed digit with 4 denticules, and movable digit with 1 denticule. Leg formula 4123. Macroseta Sge IV 22, Sti IV 27, and St IV 46. Genu II 1-2-2/0-1; genu III 1-2/1-2/0-1. Spermatheca with tubular-fundibular cervix 20 and undifferentiated atrium.

#### Male

Unknown.

DISCUSSION. This species is known from the type specimen. Nothing is known about the life history and biology of this species.

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