

A New Record of *Acaropsella volgini* (Acari: Prostigmata, Cheyletidae) for the Fauna of Turkey

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Abstract: In this study, the characteristic features of *Acaropsella volgini* (Gerson, 1967), a new record for the Turkish fauna, are given for the first time based on the drawings made from our specimens. In addition, their distribution is presented.

Key Words: *Acaropsella volgini*, Acari, Prostigmata, Cheyletidae, new record, Systematics, Turkey.

Türkiye Faunası İçin Yeni Bir *Acaropsella volgini* (Acari: Prostigmata, Cheyletidae) Türü

Özet: Bu çalışmada, Türkiye faunası için yeni kayıt olan *Acaropsella volgini* (Gerson, 1967)'nin örneklerimiz üzerinden şekilleri çizilerek yapısal özellikleri ve dünyadaki yayılışı verilmiştir.

Anahtar Sözcükler: *Acaropsella volgini*, Acari, Prostigmata, Cheyletidae, Yeni kayıt, Sistematik, Türkiye.

Introduction

The family Cheyletidae Leach, 1815 are distributed in all of the zoogeographical regions of the world and more than 200 species belonging to 54 genera have been described (1, 2). So far, only ten species of this family have been recorded in Turkey (3, 4). *Acaropsella* Volgin, 1962 is known from only Russia and Israel (1,5), and includes three species.

This paper deals with the distribution and characteristic features of *Acaropsella volgini* (Gerson, 1967) and adds a species to the Acari fauna of Turkey.

Material and Method

The mites in soil and litter samples taken from Erzincan province were extracted in Berlese's funnel. They were then fixed and preserved in 75% ethanol. The terminology and chaetotaxy are those used by Kethley (6).

Results

Family: Cheyletidae Leach, 1815

Genus: *Acaropsella* Volgin, 1962

Acaropsella, Volgin, 1962: 391. Summers and Price, 1970: 62. Gerson, 1967: 359-369.

Type species: *Neoacaropsis rohdendorfi* Volgin, 1962.

Female: Palpal femora with four setae: one dorsal, one dorso-lateral, and two ventral; genua with one dorsal seta. Tarsi with short thickened solenidion and four setae. Palpal claws with four to six dentiform processes in basal half. Peritremes arcuate, with six or seven pairs of elongated segments. Idiosoma elongated, with two large plates on dorsal side. Hysterosomal plate longer than propodosomal plate. Eyes well developed.

Ventral side of idiosoma without plates. Genito-anal setae slender, piliform or bifurcate. Tibiae I with short dorsal solenidion and five setae. Tarsi I without tuberculoid projection of apex. Solenidion w1 well proportioned, without protective seta. Ventral side of tarsus I with two central setae. Claws on tarsi I small, on II to IV much longer, smooth, and without basal processes.

Acaropsella volgini (Gerson, 1967)

(Fig.1)

Female

Body (from tip of rostrum to caudal extremity) 449 (400-493) µm long, 207 (200-220) µm wide.

Palpal femora bulge, and 1.48 times longer than maximum width. Dorsal seta on femora thickened, coarsely pubescent; lateral seta on femora small and slightly crenate. Dorsal seta of genua same structure as

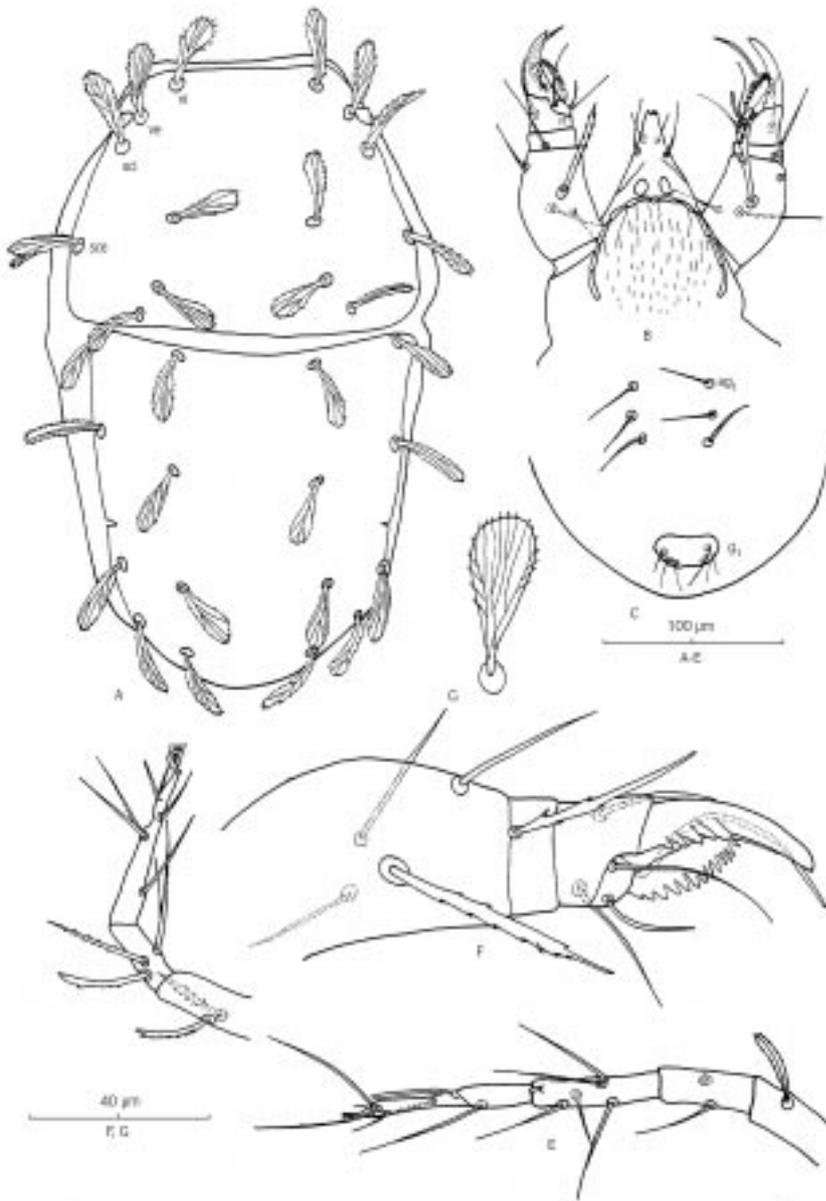


Figure 1. *Acaropsella volgini*: Female; A) Dorsum of idiosoma, B) Gnathosoma, C) Anogenital region, D) Leg IV, E) Leg I, F) Palp, G) seta vi.

that of femora. Palpal claws with five basal teeth. Outer dorsal seta on palpal tarsi with 13 or 14 processes. Peritremes arcuate and with six links.

Propodosomal plate trapezoidal, with rounded angles, its maximum width 1.3 times length; the plate carrying the eyes and seven pairs of squamiform setae; four pairs marginal setae, and three pairs central; second pairs of marginal setae located at inner margin of eyes. Histerosomal plate 1.14 times longer than propodosomal; lateral margin of plate straight, with small notch between second and third pairs of marginal setae;

plate with eight pairs of narrowly squamiform setae (fig. 1 G).

Legs. Lengths of leg (base of trochanter to tip of claws of legs): leg I 314 (333-353); II 278 (257-300); III 307 (303-313) and IV 347 (325-360) µm. Femora and genua I and II with one narrowly squamiform and one crenate, piliform seta; femora and genua III with one squamiform seta and one lanceolata; femora IV with one narrowly squamiform seta; genua IV with one narrowly squamiform seta, and one narrowly lanceolata. Tibia I with short clavate solenidion and five piliform setae;

tibiae II with one slightly broadened seta, and three piliform; tibia III and IV with two slightly broad setae, and two piliform. Tarsi I 1.4 times longer than tibia of same pair of legs. Solenidion w1 curves and about 0.50 length of tarsus I.

Examined Material: 15.12.1996, 1180 m, 300, litter under *Pinus nigra* (Arn.), Erzincan, Leg. D.A. Bal.

Distribution: Israel (1,5).

Discussion

Acaropsella volgini (Gerson, 1967) has been found in pine litter in Israel (1, 5). Our specimens have been collected from litter of *Pinus nigra* (Arn.).

References

1. Volgin, V.I. Acarina of the family Cheyletidae of the world. Amerind Publishing Co. Pvt. Ltd., New Delhi: 532 pp., 1989.
2. Summers, F.M. and Price, D.W. Review of the mite family Cheyletidae. Univ. California Publ. Entomol., 61, 1-153, 1970.
3. Koç, K. and Ayyıldız, N. Türkiye faunası için yeni iki keyletid (Acarı, Prostigmata, Cheyletidae) türü. Tr. J. of Zoology, 20 (ek sayı), 215-221, 1996.
4. Özkan, M., Ayyıldız, N. and Erman, O. Check list of the Acari of Turkey. First supplement. EURAAC News Letter, 7 (1), 4-12, 1994.
5. Gerson, U. Some cheyletid and pseudocheyletid mites from Israel. Acarologia, 9 (2), 359-369, 1967.
6. Kethley, J.B. Acarina: Prostigmata (Actinedida). In "Soil Biology Guide". Ed. Dindal L. Dindal, Jhon Wiley and Sons, Inc., New York, pp. 667-756, 1990.

The size of body of *Acaropsella volgini* is 360/210 (5) and 449 (400-493)/207 (200-220), Israel specimen and the Turkish material respectively. Our specimens are larger than the Israel specimen, in the point of both the body size and the length of leg. These differences in the dimension are considered in the variation limits. The Turkish material resembles the Israel specimen in the other features.

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