

**A DESCRIPTION OF UNKNOWN MALE AND REDESCRIPTION OF FEMALE OF THE RARE PHYTOSEIID MITE *NEOSEIULUS SUGONJAEVI* (WAINSTEIN ET ABBASOVA, 1974) (PARASITIFORMES, PHYTOSEIIDAE) FROM IRAN**

**ОПИСАНИЕ НЕИЗВЕСТНОГО САМЦА И ПЕРЕОПИСАНИЕ САМКИ РЕДКОГО ВИДА КЛЕЩЕЙ-ФИТОСЕЙИД *NEOSEIULUS SUGONJAEVI* (WAINSTEIN ET ABBASOVA, 1974) (PARASITIFORMES, PHYTOSEIIDAE) ИЗ ИРАНА**

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**ABSTRACT**

An unknown male of the rare phytoseiid mite *Neoseiulus sugonjaevi* (Wainstein et Abbasova, 1974) (Parasitiformes, Phytoseiidae) is described from the soil of sugarbeet fields in Iran. A redescription of female of this species is also given.

**РЕЗЮМЕ**

По типовому материалу (голотип-самка, топотип-самка) и экземплярам из Ирана (8 самок и 3 самца, почва на плантации сахарной свеклы, равнина Миандоаб, провинция Западный Азарбайджан, Северо-западный Иран) описан неизвестный ранее самец и сделано переписание самки редкого вида клещей-фитосейид *Neoseiulus sugonjaevi* (Wainstein et Abbasova, 1974) (Parasitiformes, Phytoseiidae).

**INTRODUCTION**

The identification of some mites from Iran by the senior author uncovered the little-known species, *Neoseiulus sugonjaevi* (Wainstein et Abbasova, 1974) (Parasitiformes, Phytoseiidae). The mites were extracted by the junior author with Berlese funnel from the soil samples of sugarbeet fields in Miandoab plain (West-Azerbaijan province, Iran).

*Neoseiulus sugonjaevi* has been described from the nest of field-vole *Microtus socialis* Pallas, 1773, *Microtus arvalis* Pallas, 1779, water vole *Arvicola terrestris* L., 1758, and *Meriones erythrourus* Gray, 1842 as well as from dung and the queen-apple *Cydonia oblonga* Mill. in Azerbaijan [Wainstein & Abbasova, 1974]. Because

the male of *N. sugonjaevi* is unknown, we give here its description, drawings and measurements. The setal nomenclature follows Kolodochka [1998]. The nomenclature of structures of spermatheca is used after Kolodochka [1990]. All measurements are given in micrometers.

The holotype and topotype females are kept in the Wainstein' Memorial collection, Institute of Zoology, National Academy of Sciences of Ukraine, Kiev — IZNASU), two females and one male from Iran are deposited in IZNASU. Tree females and one male (specimens described here) are deposited in the Acarological Collection, Zoological Museum, College of Agriculture, Tehran University, Karaj, Iran. Three females and one male from Iran are in personal collection of Prof. Jim McMurtry (P.O. Box 4487, Sunriver, Oregon 97707, USA).

***Neoseiulus sugonjaevi*  
(Wainstein et Abbasova, 1974)**

**Female** (holotype). Dorsal shield (Fig. 1, 1) oval, smooth, with 3 pairs of solenostomes (*it*, *isc*, *ic*) and 17 pairs of setae. Dorsal setae subequal (only *PM2* and *PM3* longer than other), relatively short, smooth, and sharp. All dorsal setae shorter than distance between their bases. Sternal shield smooth, with 2 pairs of solenostomes and 3 pairs of setae (*St1–St3*); setae *St3* placed on posteriolateral appendages of shield. Ventrianal scutum (Fig. 1, 2, 3) shield-like, striated. Anal pores small, situated closely to each other. There are 3 pairs of preanal setae (*PrA1*, *PrA2*, and *V2*) on

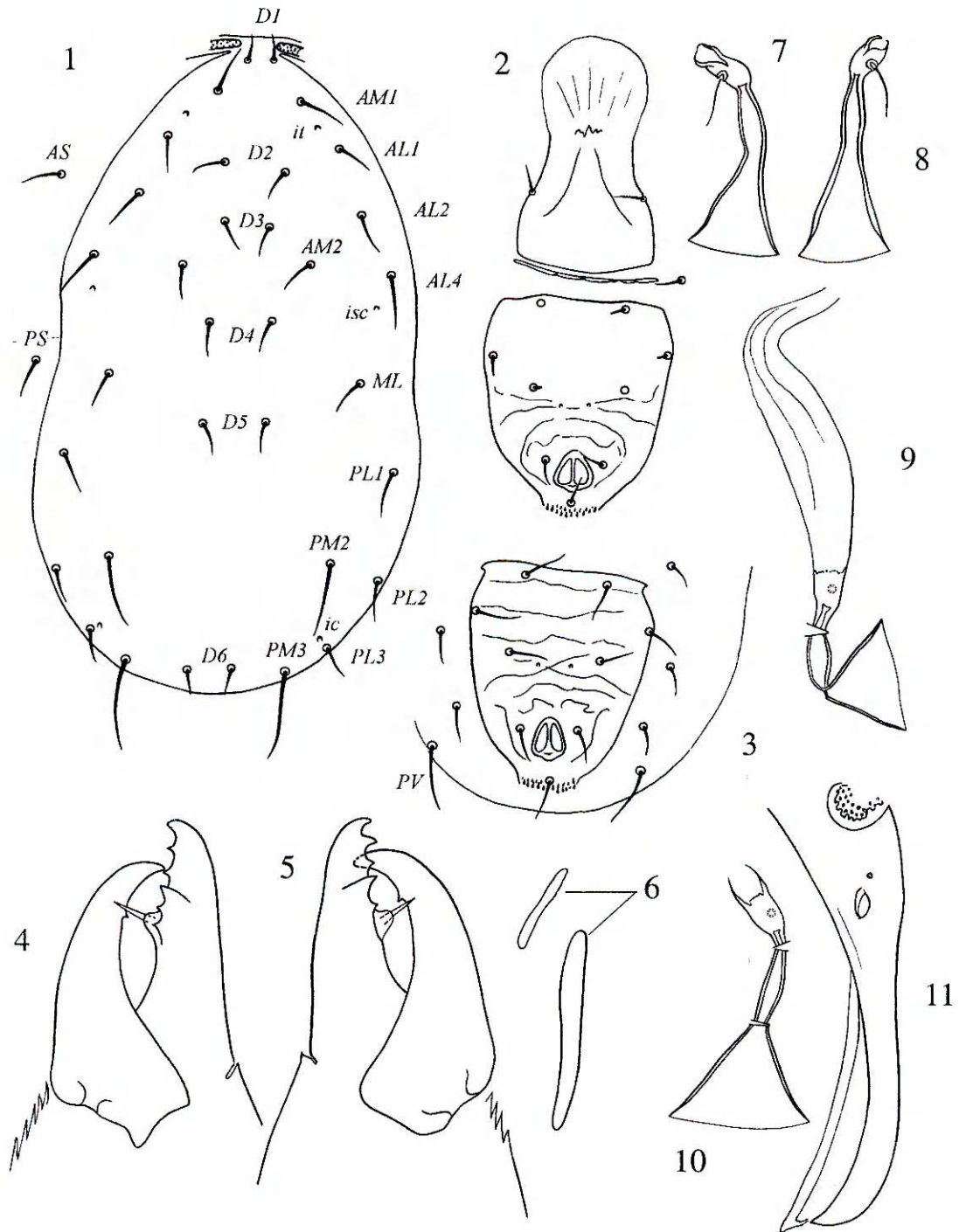


Fig. 1. *N. sugonjaevi*, female (1-11): 1 — dorsal shield; 2-3 — fragments of ventral side of body; 4-5 — chelicera; 6 — metapodal plates; 7-10 — spermatheca; 11 — caudal part of peritremal shield (1, 2, 9-11 — holotype; 3-8 — specimen from Iran).

ventrianal shield. Setae *VI*, *MV1*, *MV2*, and *PV* on integument surrounding ventrianal shield. Other ventral setae smooth, sharp, and thin. Peritreme extending anteriorly to bases of setae *D1*. Chelicerae (Fig. 1, 4, 5) normal compared to body size; fixed digit with 4 to 5 teeth, movable digit with 1 tooth. Metapodal platelets narrow (Fig. 1, 6). Spermatheca with cone-shaped fundibulum and

with large atrium, cervix missing (Fig. 1, 7-10). Posterior part of peritremal shield slightly curved (Fig. 1, 11). Macroseta on tarsus IV long, smooth; other legs without macrosetae.

Measurements as follows: Length of dorsal shield (*Lds*) — 355, width of dorsal shield (*Wds*) — 188; length of ventrianal shield (*Lvas*) — 125, width of ventrianal shield (*Wvas*) — 100, distance

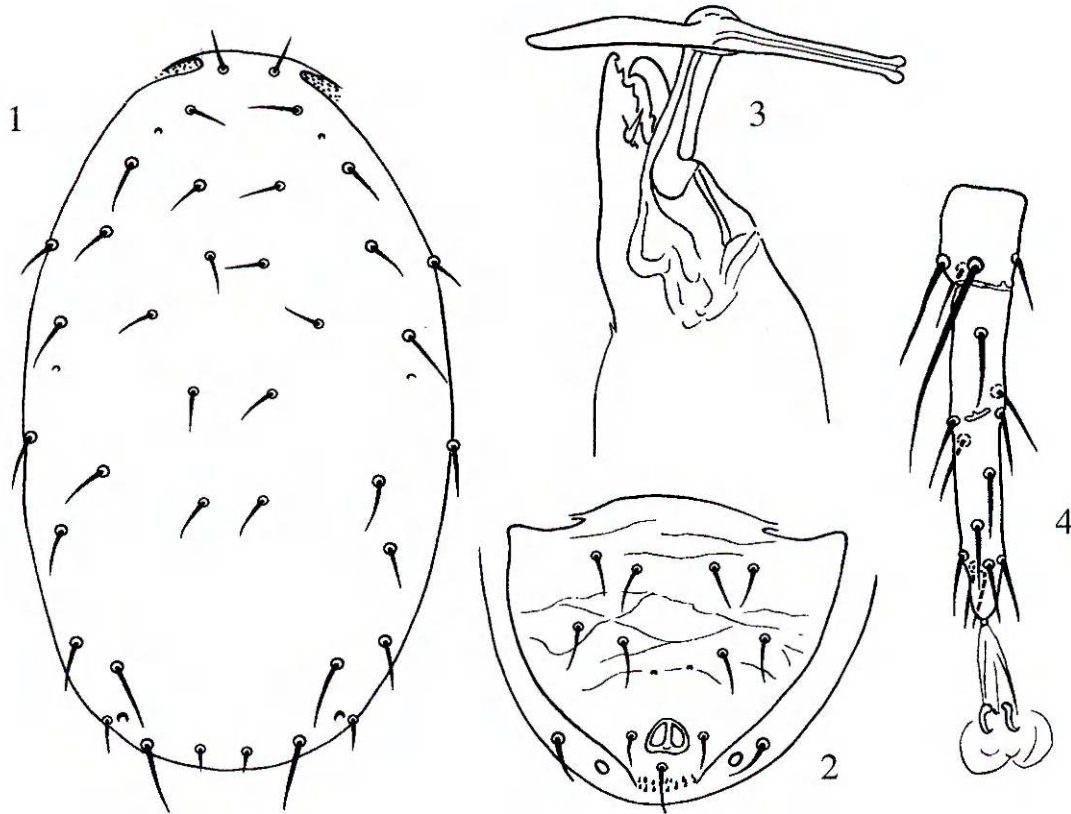


Fig. 2. *N. sugonjaevi*, male: 1 — dorsal shield; 2 — ventrianal shield; 3 — spermatodactyl; 4 — tarsus of leg IV.

between anal pores (Lian) — 13–16; length of tarsus of leg IV (Lt) — 110. Length of: *D1*, *D2*, *D3* — 18; *D4*, *D5*, *AM2*, *ML*, *PL3* — 19; *D6* — 12; *AM1* — 25; *AL1* — 21; *AL2*, *PL2*, *AS*, *PS* — 23; *AL4* — 27; *PL1* — 26; *PM2* — 35; *PM3* — 52; *PV* — 39; MCh tIV — 61.

**Male.** Setae *AS* and *PS* placed on dorsal shield (Fig. 2, 1). Ventrianal shield (Fig. 2, 2) with 3 pairs of preanal setae. Anal pores pointed and situated closely to each other. Spermatodactyl T-shaped (Fig. 2, 3), massive. Macroseta on tarsus IV long, smooth (Fig. 2, 4); other legs without macrosetae.

Measurements: Lds — 260, Wds — 153; Lvas — 107, Wvas — 125, Lian — 17–20; Lt — 78; *D1*, *D2*, *D3*, *AM2* — 14; *D4* — 15; *D5*, *AM1*, *AL1*, *AL2*, *ML*, *PL2* — 16; *D6* — 8; *AL4* — 20; *PL1* — 22; *PL3*, *AS* — 12; *PM2* — 22; *PM3* — 23; *PS* — 13; *PV* — 19; MCh tIV — 35.

**Material.** Holotype — female, slide #5371 (12), nest of *Microtus socialis*, near Jalilabad town, Azerbaijan, 14.09.1963, coll. Abbasova (IZNASU).

8 females, 3 males, from soil (Berlese funnel), sugarbeet fields, Miandoab plain, West-Azarbaijan province, Iran, 15.05 2000, coll. Hajiqanbar.

**Remark.** The holotype is crushed.

## DIFFERENTIAL DIAGNOSIS

*Neoseiulus sugonjaevi* is similar to *Neoseiulus liticellus* (Athias-Henriot, 1966) and differs from it by having a cord on the cone-shaped funnel of spermatheca. From other related species, *N. aruntunjani* (Wainstein et Begljarov, 1971) and *N. makuwa* (Ehara, 1972), the redescribed species differs in proportions of some dorsal setae, in having the smaller number of dorsal solenostomes as well as in having one (not two) macrosetae on leg IV and other minor characters in addition to the differences in the spermatheca structure.

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