

A new species of *Oligonychus* (Acari: Tetranychidae) from Korea

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ABSTRACT

A new species of the genus *Oligonychus* Berlese, 1886, *Oligonychus solus* n. sp. is described with its diagnostic characteristics and figures from Korea. This new species resembles closely to *Oligonychus ununguis* (Jacobi, 1905), but is easily distinguished by the transverse striae anterior to genital flap.

Key words: Acari, Tetranychidae, *Oligonychus*, new species, Korea

INTRODUCTION

Genus *Oligonychus* is readily recognized by a pair of para-anal setae, clawlike empodium with proximoventral hairs and two duplex setae adjacent. The new species presented here is only found on *Pinus densiflora* Sieb et Zucc. Originally, this species was firstly recorded by Lee et al.(1988) without species name. They stated that this species is different from *Oligonychus ununguis* in total size, the size of dorsal setae, and the number of tactile setae proximal to duplex setae of tarsus I.

DESCRIPTION

***Oligonychus solus* n. sp** (솔응애) (신칭) (Figs. 1-10)

Materials examined. Holotype, ♀, Korea: Chonbuk Province, Chonju. 17-VI-1988(J.S. Lee), on *Pinus densiflora* Sieb et Zucc. Allotype, ♂, Korea: Kwangju, 20-V-1997(J.S. Lee), on the above host. Paratypes: 10 ♀♀ & 7 ♂♂, with the above data. Specimens are deposited at Chonbuk

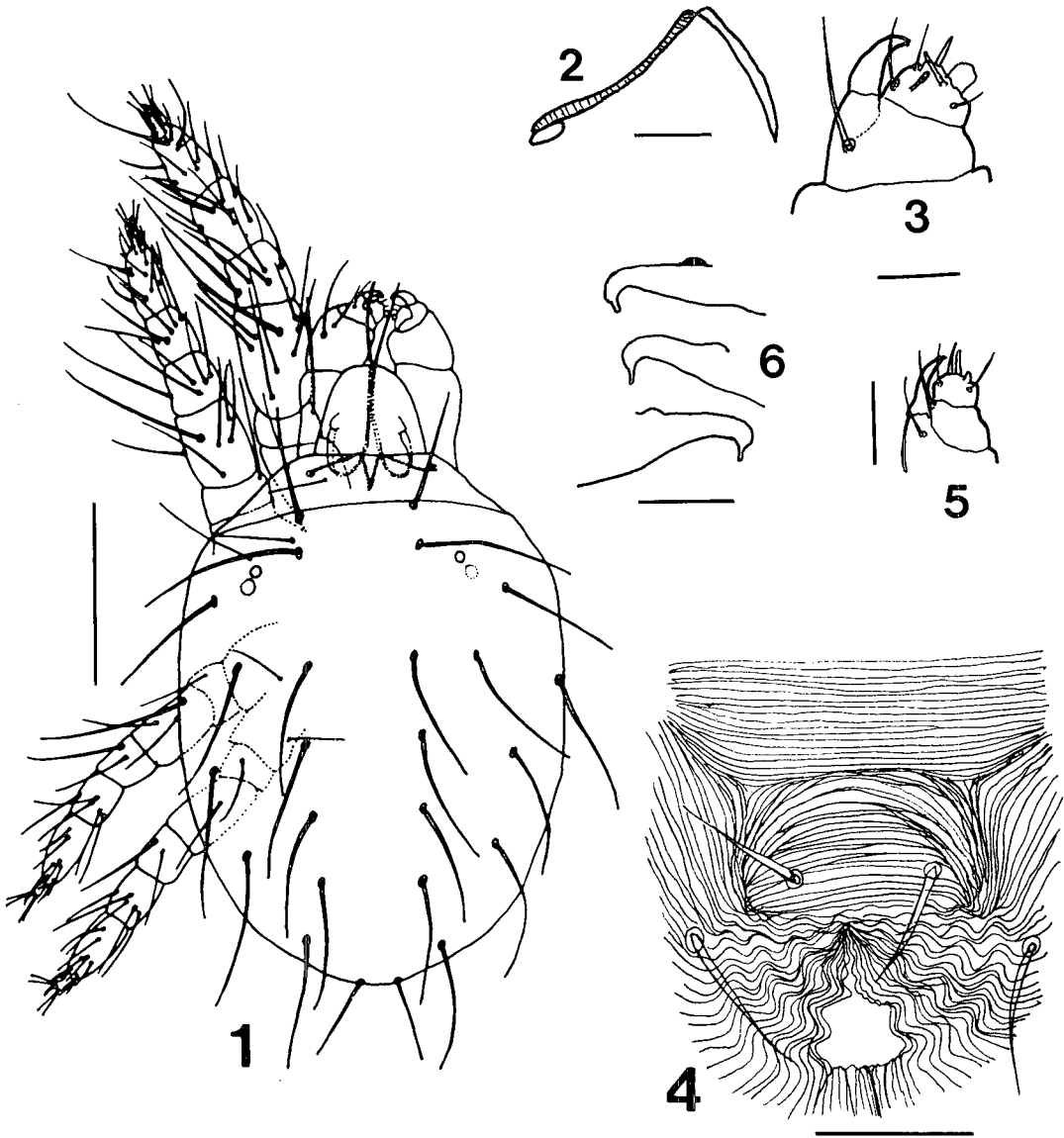
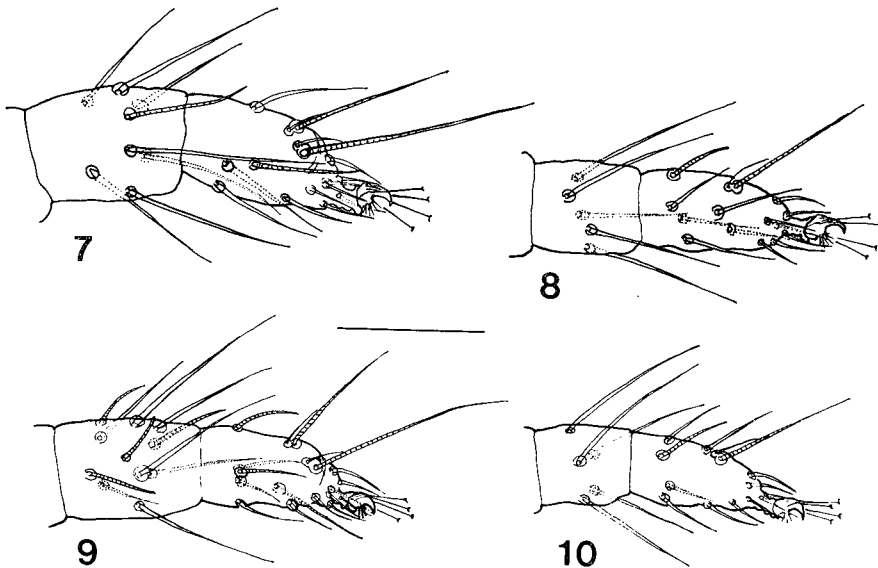


Fig. 1-6. *Oligonychus solus* n. sp. 1. Dorsum of female; 2. Peritreme of female; 3. Distal segment of palpus of female; 4. Genital flap of female; 5. Distal segment of palpus of male; 6. Aedeagi of male. (Scales: 1=100 μ m; 2, 3, 5, 6=10 μ m; 4=30 μ m).

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Female: Body, including rostrum, 378 μ long, 248 μ wide. Peritreme simple, slightly dilated distally (Fig. 2). Spinneret stout, about as long as wide (Fig. 3). Dorsal body setae slender, pubescent, much longer than distances between their bases. Outer sacral setae approximately as long as inner sacral setae (Fig. 1). Area immediately anterior to genital flap with transverse striae (Fig. 4). Tibia I with seven tactile and one sensory setae. Tarsus I with three tactile and one sensory setae



Figs. 7-10. *Oligonychus solus* n. sp. 7. Tarsus and tibia I of female; 8. Tarsus and tibia II of female; 9. Tarsus and tibia I of male; 10. Tarsus and tibia II of male. (scale=50 μ m).

proximal to proximal set of duplex setae, one sensory seta ventrad to duplex setae (Fig. 7). Tibia II with five tactile setae. Tarsus II with four tactile and one sensory setae proximal to duplex setae and one tactile seta ventrad to duplex setae (Fig. 8). Tibia III with four tactile setae. Legs chaetotaxy of coxa, trochanter, femur, genu, tibia and tarsus; I: 2-1-8-5-8(1)-16(6), II: 2-1-6-5-5-15(5), III: 1-1-2-2-5-9(1), IV: 1-1-1-2-5-9(1).

Measurements of setae in microns: lengths of dorsal setae (N=10): P1; 68.3 \pm 1.6, P2; 102.4 \pm 4.1, P3; 72.6 \pm 2.1, H; 89.6 \pm 2.7, D1; 83.4 \pm 2.1, D2; 80.8 \pm 3.7, D3; 75.2 \pm 3.1, D4; 69.0 \pm 1.9, D5; 48.0 \pm 1.2, L1; 91.8 \pm 4.5, L2; 89.7 \pm 3.9, L3; 86.9 \pm 3.5, L4; 65.7 \pm 2.9, inner sacral (D4, N=16): 68.4-84.9, Ratio of D5/D4:0.59-0.72, L4/D4:0.83-1.03.

Male: Tibia I with seven tactile and four sensory setae. Tarsus I with three tactile and three sensory setae proximal of duplex setae, one tactile seta ventrad of duplex (Fig. 9). Tibia II with five tactile setae (Fig. 10). Aedeagus shaft dorsally with a minute convex notch near base, bent downward nearly rectangular from its axis to form the bill and head shape of bird (or to form the hook which attenuate to a tip abruptly) (Fig. 6).

Remarks: *Oligonychus solus* n. sp resembles *O. ununguis* (Jacobi), but this species differs from *O. ununguis* by the transverse striae anterior to genital flap and the different number of setae of tarsus I and II proximal to duplex setae. That is, *Oligonychus solus* n. sp. inhabiting on *Pinus densiflora* has tarsus I with three and tarsus II with four tactile setae. However, *Oligonychus ununguis* inhabiting on *Picea* and *Abies* has tarsus I with four tactile and tarsus II with four tactile setae, while *Oligonychus ununguis* inhabiting on *Quercus* and *Castanea* has tarsus I with three and tarsus II with three tactile. Ehara (1962) regarded these differences of number of setae as variation. Pritchard and Baker (1955) observed tarsus I with three tactile proximal to duplex setae on

pine in Maryland and suggested the possibility that this sample might be different from *Oligonychus ununguis*.

Etymology: This species was named after host plant, "sol" (Korean common name of pine tree).

Host plant: *Pinus densiflora* Sieb et Zucc.

Distribution: Korea (Chunchon, Nonsan, Chonju, Kwangju).

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한국산 *Oligonychus*속(진드기목: 응애과)의 1신종

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요 약

소나무에서 *Oligonychus* 속의 1신종 *Oligonychus solus* n. sp.가 채집 발견되었기에 기재하여 보고한다. 본 종은 *Oligonychus ununguis* (Jacobi, 1905)와 유사하나 체장과 배면모의 크기가 작고, 생식개구 앞의 주름이 가로로 나 있어 쉽게 구분된다.