

## SCALOPACARUS SCAPANUS SP. N. (ACARI: GLYCYPHAGIDAE), A NEW FUR-MITE FROM SCAPANUS TOWNSENDII IN THE USA

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**ABSTRACT:** *Scalopacarus scapanus* sp. n., represented by the hypopial stage, is described from *Scapanus townsendii* (Bachman) in Washington State, USA. It differs from *S. obesus* and *S. sasai* by its thicker Epimera IV, closed Coxal Area IV, by foliate aspect of seta of Genu III, and by the thicker and forked tibial Setae I and II. The genus *Scalopacarus* is redefined and a key is provided for the known species.

The genus *Scalopacarus* Fain and Whitaker 1973, was represented previously by two species, both known only from their heteromorph deutonymphs (=hypopi). A third species, *S. scapanus* sp. n., is described herein from *Scapanus townsendii* from the USA.

### *Scalopacarus scapanus* sp. n. (Figs. 1-5)

#### Description

**Hypopus:** Holotype 237  $\mu$  long and 180  $\mu$  wide. Length and width of three paratypes: 231  $\times$  175  $\mu$ , 228  $\times$  169  $\mu$ , and 227  $\times$  174  $\mu$ . **Dorsum.**—Propodotum with an incomplete furrow in front of se-jugal furrow. Hysteronotum with a median, mushroom-shaped punctate area. Dorsal setae very thin and short, except *d* 5 longer (18–20  $\mu$ ) and broadly foliate. **Venter.**—Sternum thick and short. Epimera IV thick, long, and fused at apex with Epimerite IV which is long and narrow. Claspings organ bearing behind a pair of well-developed triangular hooks, directed laterally. Anterior clasper 18  $\mu$  long, with 12 to 14 ribs; posterior clasper 28  $\mu$  long, with 13 ribs. Palposoma as in the other species of the genus. Solenidia *alpha* very short. Legs I to IV (from base of femur until tip of tarsus, claw excluded) 69, 70, 78, and 92  $\mu$  long, respectively; the Tarsi I–IV 18, 16, 21, and 16  $\mu$  long, respectively. Tarsi with 8-8-9-8 setae. Tarsi I–II with a pair of long (32–35  $\mu$ ) apical, foliate setae and six very short setae. Tarsi III with four long (45–60  $\mu$ ) setae, two foliate setae, and three short, nonfoliate setae. Tarsi IV bearing a thick seta 110  $\mu$  long, three thinner and rather long setae (40–80  $\mu$ ), an apical foliate seta, a dor-sobasal foliate seta, a dorsal spine and a dorsal simple seta. Tibiae and Genua I–II with two thick and bifurcate or trifurcate setae; the anterior setae barbed. Seta of Tibia IV 75  $\mu$  long. **Solenidia.**—Tarsi 2-1-0-0; tibiae 1-1-1-0; genua 1-1-0-0. On Tarsus I solenidion  $\omega$  1 is basal and close to  $\omega$  3. Solenidion of Genu I is very short.

#### Type specimens

**Holotype:** United States National Museum (USNM) Coll. No. 3964, hypopus.

**Paratypes:** 9 hypopi.

**Host:** *Scapanus townsendii* (Bachman) (Coll. No. MLJ 6161), collected by M. L. Johnson.

**Locality:** USA: Washington: Clallam Co.: Olympic National Park: Hurricane Ridge.

**Site of infection:** Hairs.

**Etymology:** The species is named after its host.

#### Remarks

This new species differs from *S. obesus* Fain and Whitaker 1973, and *S. sasai* Fain et al. 1974, by the thicker aspect of Epimera IV and the fusion of this sclerite with Epimerite IV forming a closed Coxal IV area, by the foliate aspect of the seta of Genu III, and by the thicker and forked aspect of the tibial setae of Legs I and II. In addition, *S. obesus* has a much greater development of the triangular processes on the lateral surfaces of the opisthosoma and the sternum is shorter and wider. From *S. sasai* it differs by the greater size of the body and the foliate aspect of the  $\ell$  5 setae. The addition of this new species makes it necessary to redefine the genus *Scalopacarus*. The definition is based on the hypopi, the adults being unknown.

**Definition:** Body ovoid. Palposoma bearing two pairs of long setae and one pair of short solenidia *alpha*. Setae *vi* and *ve* are present. Solenidia of Tibiae I–II relatively very short. Claws on Tarsi III and IV subequal and much smaller than those of anterior tarsi. Epimera and Epimerite IV either separate or fused. Claspings organ produced behind into a pair of triangular hooks directed laterally. Lateral surfaces of opisthosoma with a pair of laterally directed hooks variably developed. Legs I–II with two long membranous setae and several very small spines or piliform setae. Tarsi IV with one very long and strong seta and several

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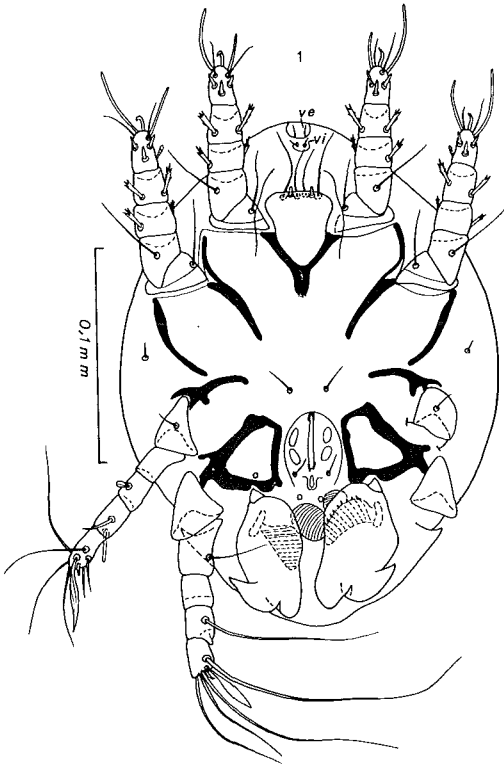


FIGURE 1. *Scalopacarus scapanus* sp. n. Hypopus (holotype) in ventral view.

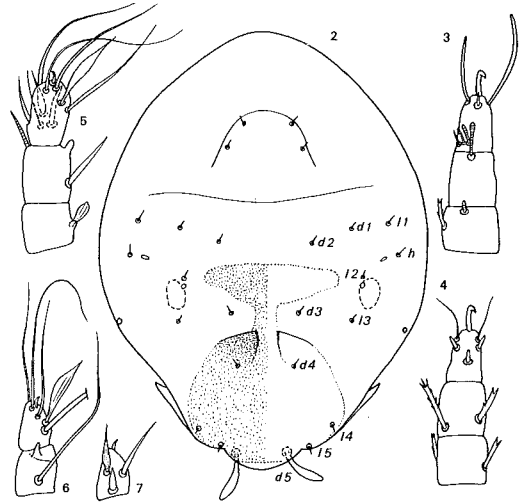
other much shorter setae. Tibia IV with a long or very long and moderately thick seta.

*Type species: Scalopacarus obesus* Fain and Whitaker, 1973.

*Hosts:* On Talpidae (Talpinae and Desmaninae).

**Key to the species (hypopi)**

1. Epimerite IV long, either meeting or closely approaching Epimera IV; Coxal Field IV either completely or incompletely closed. Setae *d 5* broadly foliate. Body larger (length 227–250  $\mu$ ). Setae *sc i* situated in front of the *sc e* .....  
Epimerite IV very short; Coxal Fields IV widely open. Setae *d 5* cylindrico-conical. Body smaller (length 181–186  $\mu$ ). Setae *sc i* and *sc e* on a transverse line. On *Urotrichus talpoides* Temm. (Japan) .....  
..... *S. sasai* Fain, Lukoschus and Uchikawa 1974
2. Epimera IV much thicker than Epimerite IV



FIGURES 2-7. *Scalopacarus scapanus* sp. n. 2. Hypopus in dorsal view. 3-4. Tarsus, tibia, and Genu I in dorsal (3) and ventral view (4). 5. Tarsus, tibia and Genu III laterally. 6. Tarsus and Tibia IV ventrally. 7. Tarsus IV dorsally.

and fused apically. Sternum short and thick. Setae of Tibiae I-II thick, bifurcate, or trifurcate, and some are barbed. Lateral surfaces of opisthosoma with well-developed, laterally directed hooks. Seta of Genu III short, broadly foliate. On *Scapanus townsendii* (USA) ..... *S. scapanus* sp. n. Epimera and Epimerite IV subequal in width and remaining separate. Sternum long and narrower. Setae of Tibia I-II thin and smooth. Lateral surfaces of opisthosoma either without or with poorly developed hooks. Seta of Genu III piliform. On *Scalopus aquaticus* (L.) (USA) .....  
..... *S. obesus* Fain and Whitaker 1973

**ACKNOWLEDGMENT**

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