

LABIDOPHORUS NEARCTICUS N. SP. (ASTIGMATA: LABIDOPHORINAE) A NEW GLYCYPHAGID MITE FROM *PARASCALOPS BREWERI* IN THE UNITED STATES

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ABSTRACT: A new fur mite, *Labidophorus nearcticus* n. sp., represented by its phoretic deutonymphs (hypopi), was described from the mole *Parascalops breweri* (Insectivora, Talpidae), from the United States.

The genus *Labidophorus* Kramer, 1877 (Glycyphagidae) was represented previously by 2 species, *Labidophorus talpae* Kramer, 1877 and *Labidophorus orientalis* Fain, 1969. Both species have phoretic deutonymphs which attach to the hairs of insectivores. *Labidophorus talpae* lives as adults in the nest of the mole *Talpa europaea* in Europe and its deutonymphs attach to the mole. *Labidophorus orientalis* is known only from the hypopial stage found on the hairs of Oriental insectivores.

The new species that we describe herein, *Labidophorus nearcticus*, is known only from the deutonymphal stage. It has been found on the hairs of the hairy-tailed mole, *Parascalops breweri* (Talpidae) from the U.S.A., and was previously reported as *L. talpae* by Fain and Whitaker (1973). Moles, but no nests, have been examined.

DESCRIPTION

Labidophorus nearcticus n. sp.

(Figs. 1-7)

Hypopus (Figs. 1-7): Holotype 198 μ m long, 168 μ m wide. Length \times width of 3 paratypes (in μ m): 189 \times 162, 192 \times 174, and 195 \times 180. **Dorsum:** Sejugal furrow almost complete. Short incomplete furrow in posterior half of hysteronotum, followed by 2 short transverse punctate bands. **Venter:** Epimeres I fused in sternum 10 μ m long. Epimeres II-III free. Epimeres and epimerites IV fused forming closed coxal fields separated at midline. Soft surface of coxae IV 17 μ m long and 24 μ m wide (ratio 1:1.4). Clasping organ well developed, with 2 paramedial folds with posterior extremities turned outwards appearing hooklike. Internal clasper 13 μ m long, 8.5 μ m wide with 9 to 10 ribs; external clasper 25 μ m long (base included) with 8 ribs. Palposoma rounded, very wide, bearing 2 pairs of thin subequal setae (internal 19 μ m, external 23 μ m); 1 pair of more internal solenidia *alpha* 2.5 to 3 μ m long. **Legs:** Tarsal lengths I 14.5-15.0 μ m; II 12-13 μ m; III 18-

19 μ m; IV 19.5-20.5 μ m. Lengths of claws (I to IV, in μ m): 9-10; 9-10; 3.8-4.2; 2.4 (only the external free part of the claw is measured). Trochanters III, IV each with basally recurved rounded external hook. **Chaetotaxy:** *Idiosoma:* *vi* ventral 3-4 μ m; *ve* dorsal, shortly barbed, 12-13 μ m long; *s cx* completely ventral; *sc i*, *sc e* very short, thin, situated on slightly concave line. Hysteronotal setae very thin, short; setae *l 5* ventral, thick, long (15-16 μ m). Setae *cx I*, *cx III* represented by very small ringlets; *gm*, *ga* very short; *gp* represented by ringlet. **Legs:** Tarsi with 8-8-8-8 setae; tarsi I to III with 4 narrowly foliate setae, 4 unequal simple setae. Tarsus IV with 1 broadly foliate seta, 2 narrowly foliate setae, 5 simple or spinose setae. Tibiae 2-2-1-1; setae of tibia III 22 μ m long, tibia IV 15 μ m long. **Solenidia:** Tarsus I with short $\omega 1$ dilated apically, much shorter $\omega 3$ cylindrical, very small famulus.

Type specimens

Host and locality: Holotype and 5 paratypes, all heteromorphic deutonymphs (hypopi) from the hairs of *Parascalops breweri* (Bachman) (TF 782) collected 7.2 air miles SW of Ithaca, Tompkins Co., New York, 21 Sept. 1980.

Other paratypes from the same host species and locality (TF 854) (1 hypopus), and from Otsego Co., Milford Gorge, 3 July 1970 (JOW 5980) (2 hypopi).

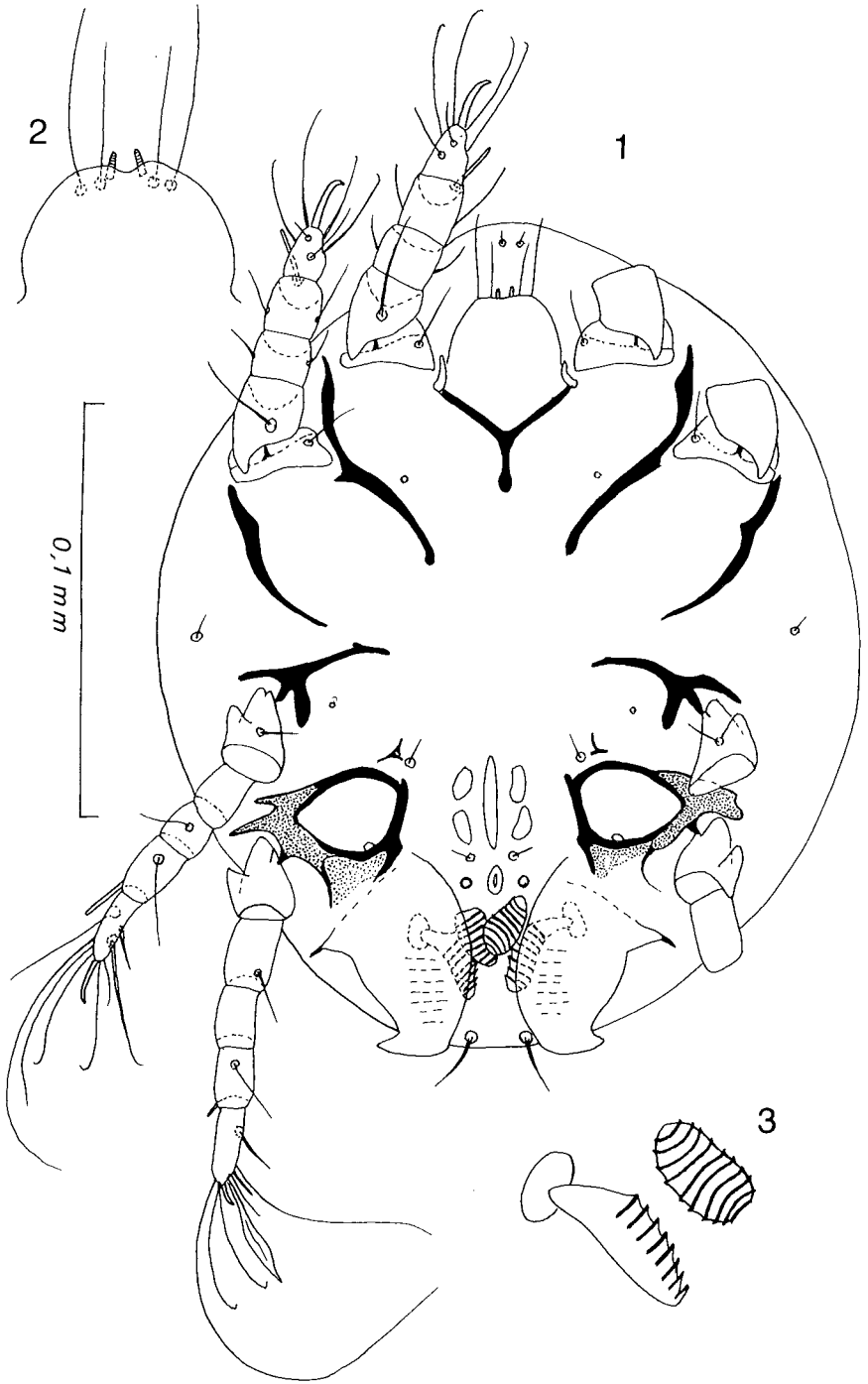
Holotype: Deposited in the National Museum of Natural History, Washington, D.C. **Paratype:** Deposited in Institut royal des Sciences naturelles de Belgique, Bruxelles.

REMARKS

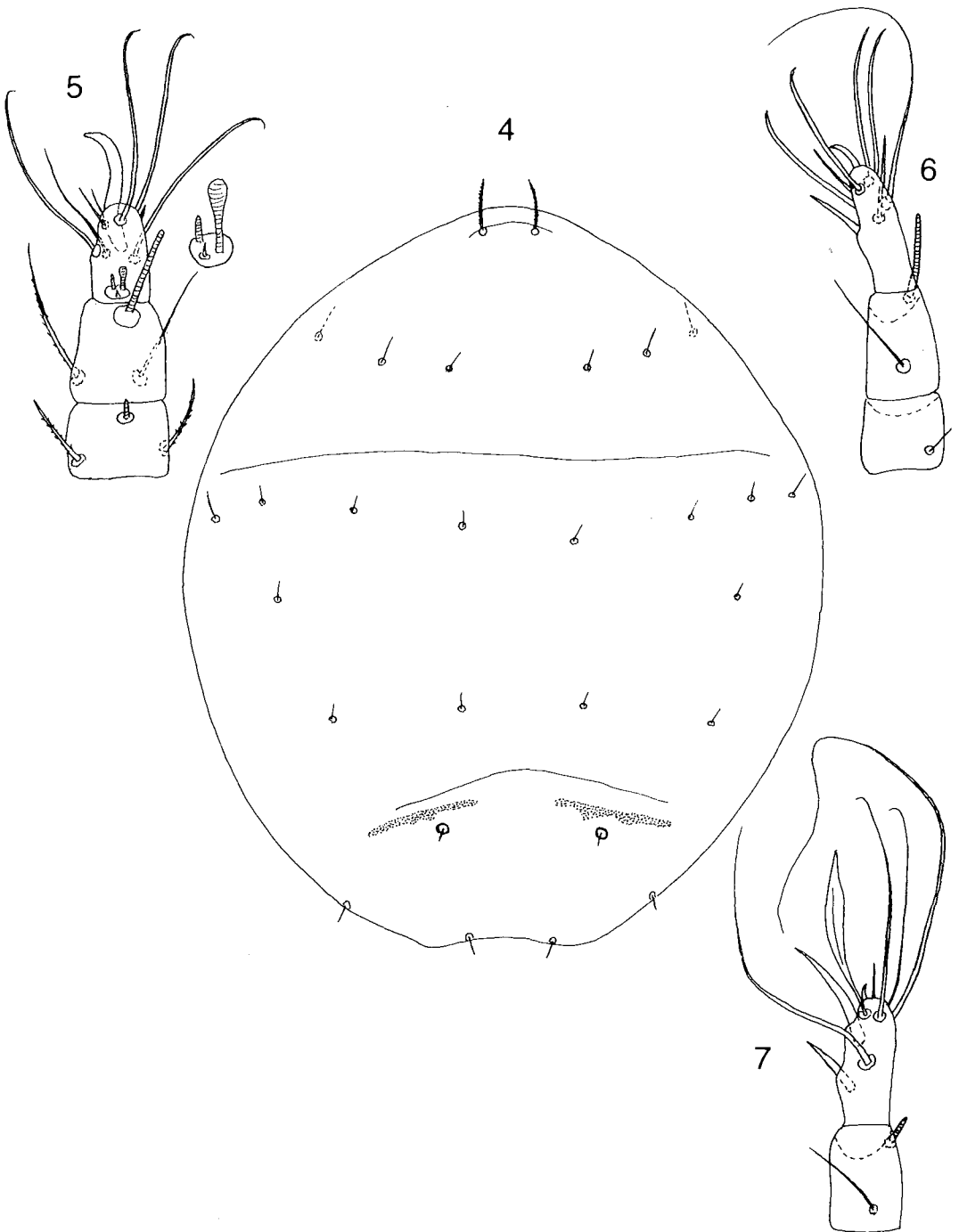
This species is closest to *Labidophorus talpae* (see Fain, 1969). It differs from it by the following characters: 1) Body smaller (in *L. talpae* 230 to 255 μ m long and 180 to 210 μ m wide). 2) Tarsi III and IV shorter (26 μ m long in *L. talpae*) while tarsi I and II are as long as in *L. talpae*. 3) Different shape of coxal ring IV, the bare area of the coxal field is relatively longer; in *L. talpae* this area is 15 to 17 μ m long and 31 to 32 μ m wide (ratio width:length varies from 1:1.8 to 1:2.06); in *L. nearcticus* this ratio varies from 1.4 to 1.6. 4) Setae *ve* longer (in *L. talpae* 8.5 μ m). 5) Setae of tibiae III and IV and trochanters

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FIGURES 1-3. *Labidophorus nearcticus* n. sp. Hypopus. 1. In ventral view. 2. Palposoma, enlarged. 3. Claspers, enlarged.



FIGURES 4-7. *Labidophorus nearcticus* n. sp. Hypopus. 4. Dorsal view. 5. Leg I in dorsal view. 6. Leg III in ventral view. 7. Leg IV (tarsus and tibia) in ventrolateral view.

I to III distinctly shorter. 6) Claspers with fewer ribs (in *L. talpae* the internal clasper bears 10–11 ribs, the external 10–12 ribs). 7) Solenidion of palposoma slightly longer (in *L. talpae* 2 to 2.2 μm).

L. nearcticus is clearly distinct from *L. orientalis* by the different shape of epimeres III and IV, by the presence of a sejugal furrow, by the shorter length of the tarsi, by the much longer palposomal setae, by the much narrower shape of the tarsal foliate setae, and by the much shorter length of solenidion ω 3.

KEY TO THE GENUS LABIDOPHORUS (HYPOPI)

- 1. Coxal field IV small, surrounded by a very thick poorly sclerotized ring. Sejugal furrow absent. Femora IV with a large rounded, ventral and basally recurved process. Setae *sc i* distinctly behind *sc e*. Distance *d 3-d 3* much greater than distance *d 3-l 3*. Tarsi I–II longer (22–21 μm respectively). Setae *ga* far in front of coxal rings IV *L. orientalis* Fain, 1969
- 2. Coxal field IV large, surrounded by a narrow, strongly sclerotized ring. Sejugal furrow well developed. Femora IV without processes. Setae *sc i* about on the same line as *sc e*. Distance *d 3-d 3* smaller than distance *d 3-l 3*. Tarsi I–II shorter (15 and 13 μm respectively). Setae *ga* close to coxal rings IV

- 2. Body 230–255 μm long. Lengths of tarsi I–IV (in μm); 15-13-26-24, of claws 18-17-9-4.6. Bare area of coxal fields IV 1.8 to 2.06 times as wide as long. Length of setae *ve* 8.5 μm , of solenidion alpha 2–2.2 μm . Setae of tibiae III–IV distinctly longer than the respective tibiae *L. talpae* Kramer, 1877
- Body smaller (length 189–198). Tarsi III–IV shorter (18 to 19 and 19.5 to 20.5 μm), the tarsi I–II as long as in *L. talpae*. Claws I–IV shorter (maximum 10-10-4.2-2.4 μm). Bare area of coxal fields IV 1.4 to 1.6 times as wide as long. Length of setae *ve* 12–13 μm , of solenidion alpha 2.5 to 3 μm . Tibial setae III and IV as long as the tibiae *L. nearcticus* n. sp.

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