

## TWO TYROGLYPHINA (SARCOPTIFORMES) OF TAHITI\*

By

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One of the species belongs to the Tyroglyphinae and the other to the Phthiracarinae.

### TRIBE TYROGLYPHINI

Characters: dorsum of tarsi I without stout thornlike bristles, at least none immediately distad of the scent club.

### Genus CALOGLYPHUS Berlese

*Caloglyphus* Berlese: Redia, vol. 15, p. 262, 1923.

Characters: prothorax bearing but 2 pairs of bristles, the vertex bristles much shorter than the lateral; tarsi I with a stout thornlike bristle dorso-distally; post-thorax with long and short bristles, abdomen with long bristles; ventral face of tarsi with at least 1 thornlike bristle.

Type, *Tyroglyphus mycophagus* Berlese: Acari, Myriapoda et Scorpiones hucusque in Italia reperta, p. 235, pls. 7, 8.

The type is erroneously stated in the Tierwelt Mitteleuropas.<sup>1</sup> I cannot consider *Cosmoglyphus*,<sup>2</sup> as no adult characters are given.

### *Caloglyphus introitus*, new species (fig. 1, a-f).

Diagnostic characters: long bristles of body longer than width of abdomen; dorsum of post-thorax with 2 pairs of short bristles; a pair of long, erect bristles near anterior edge of dorsum of abdomen, other 5 pairs of abdominal bristles long; female with 3 medium long, stiff bristles each side of anus (whence the specific name); males with a minute bristle anterior to anal suckers (fig. 1, e), and 2 each side of genital opening; tarsi I with only 1 thornlike bristle on dorsal face and 1 on ventral face (besides the rudimentary distal); tarsus IV of male with two suckers.

Description: size of females 0.68-0.85 by 0.34-0.47 mm., males averaging smaller; length of tarsi I, 90  $\mu$ ; body ovate, fairly broad, depressed; mouth parts prominent, mandibular chelae slender; cephalon broad, widening rapidly into sides of prothorax; bearing 2 pairs of bristles: rostral almost as long as mouth parts, stout, tapering suddenly, ribbed, finely burred; camerostomal bristles stout, strongly curved mesad, burred; prothorax sinuous between leg insertions; with 3 pairs of bristles: nuchal bristles inserted over coxae I at foot of posterior curve of cephalon, extending to anterior edge of prothorax; lateral bristles unusually long, extending to distal end of mouth parts when depressed, inserted near sides of prothorax; vertex bristles longer than nuchal, inserted between lateral on a "suture" which joins the lateral bristles (fig. 1, b); post-thorax delimited posteriorly by a fine "suture," crossed by two others, anterior to anterior suture is inserted a pair of fine bristles, nearly as remote as lateral of prothorax; on second suture is inserted a pair of fine bristles, slightly longer than preceding pair and more approximate; sides of post-thorax with 2 pairs of bristles, a major pair long and outstanding, a short pair

<sup>1</sup> Vitzthum, Hermann, Ordnung Milben, Acari: Tierwelt Mitteleuropas, vol. 3, Lief. 3, pt. 7, p. 74, 1923.

<sup>2</sup> Oudemans, A. C., Acarologische Aanteekeningen, 112: Ent. Ber., vol. 8, p. 358, 1932.

\* Pacific Entomological Survey Publication 6, article 23. Issued May 16, 1934.

inserted anterodorsad of major pair; a third pair of short bristles similar to the minor pair inserted ventrodorsad of major; abdomen with a pair of short bristles inserted at sides close to anterior edge, and 6 pairs of long bristles disposed as in figure 1, *b*; posterior end of abdomen somewhat transversely wrinkled; of the long bristles the posteroventral are the shortest and straightest, while the middle lateral are only slightly longer but more flexible; all these bristles are smooth, quite stout at base, and flexuous along distal fifth.

Ventral face of prothorax with but one pair of bristles (on parasterna I); trochanters (coxae) I to III with a fine bristle; parasterna III with a bristle, none distinguished about parasterna IV; female genital aperture slightly posteriad of coxae III, with a medium-long bristle inserted "above" genital suckers; copulatory orifice large, transverse, conspicuous, close behind anal opening; the three bristles each side of anal opening are ribbed, burred, stiff and erect, recalling Hobbema's Avenue (and whence the specific name), middle anal bristles closer to posterior than to anterior, anterior bristle shortest, posterior longest; male genital aperture between trochanters (coxae) IV; a pair of short, erect bristles posterior to paranal suckers, another pair posterolaterad of suckers (fig. 1, *e*).

Legs I (fig. 1, *a*) with long, slender tarsi, scent club with two minute, stout, erect bristles and a similar, slightly longer, obliquely inserted bristle; distal end of tarsi with a short thornlike bristle on dorsal face and a long, fine bristle inserted close to it, ventral face with a rudimentary bristle at distal end, a short thornlike bristle inserted two fifths length of segment from distal end of segment; lateral face with a long bristle inserted on transverse plane just proximad of dorsal thorn, mesal face with a medium-long, sharply pointed, stiff bristle inserted on transverse plane anterior to dorsal thorn, lateral and a long bristle corresponding to long bristle of lateral face (see fig. 1, *f*, showing beneath tarsus in fig. 1, *a*), these two long bristles slightly lanceolate at distal end (fig. 1, *f*). Tibiae as long as broad; with a long, stout bristle curving strongly mesad and ventrad, inserted a short distance from dorsodistal edge; a short, somewhat stout bristle inserted its length from ventrodorsal edge; a long bristle inserted nearly on same transverse plane on ventromesal side. Genuals slightly shorter than high, with two unequal, medium-long bristles inserted a short distance from dorsodistal edge of segment; a similar lateral bristle inserted one third length of segment from proximal end of segment; a short, somewhat stout bristle inserted on dorsomesal face close to proximal edge of segment. Femora at least twice as long as broad, with a single, fairly long, slender bristle inserted a short distance from distal end of segment on ventrolateral face.

Legs II quite similar but genuals with but one dorsodistal bristle, the lateral bristle slightly shorter.

Legs III similar to II but all thornlike bristles more slender; proximal quartette lacking; tarsi with long bristle of dorsal face shortly proximad of thornlike bristle, ventrodorsal bristle more proximad, more conspicuous; stiff bristle of mesal face lacking. Tibiae with only one ventral bristle. Genuals with no dorsoproximal bristle. Femora without bristles.

Legs IV of females similar to legs III but tarsi without long mesal face bristle (fig. 1, *d*). Genuals without bristles! Femora with a bristle nearly as long as the segment inserted near distal end of segment.

Legs IV of males (fig. 1, *c*) as females, but tarsi without the two dorsal bristles, two suckers instead, but more widely spaced. Tibiae with long, curved dorsodistal bristle reduced to a short, stout, spurlike structure.

Tahiti: Hitiaa, southwest of Hitiaa Village, altitude 1500 feet, November 20, 1928, 4 males, 23 mostly ovigerous females, A. M. Adamson, slide 33M5 (cotypes).

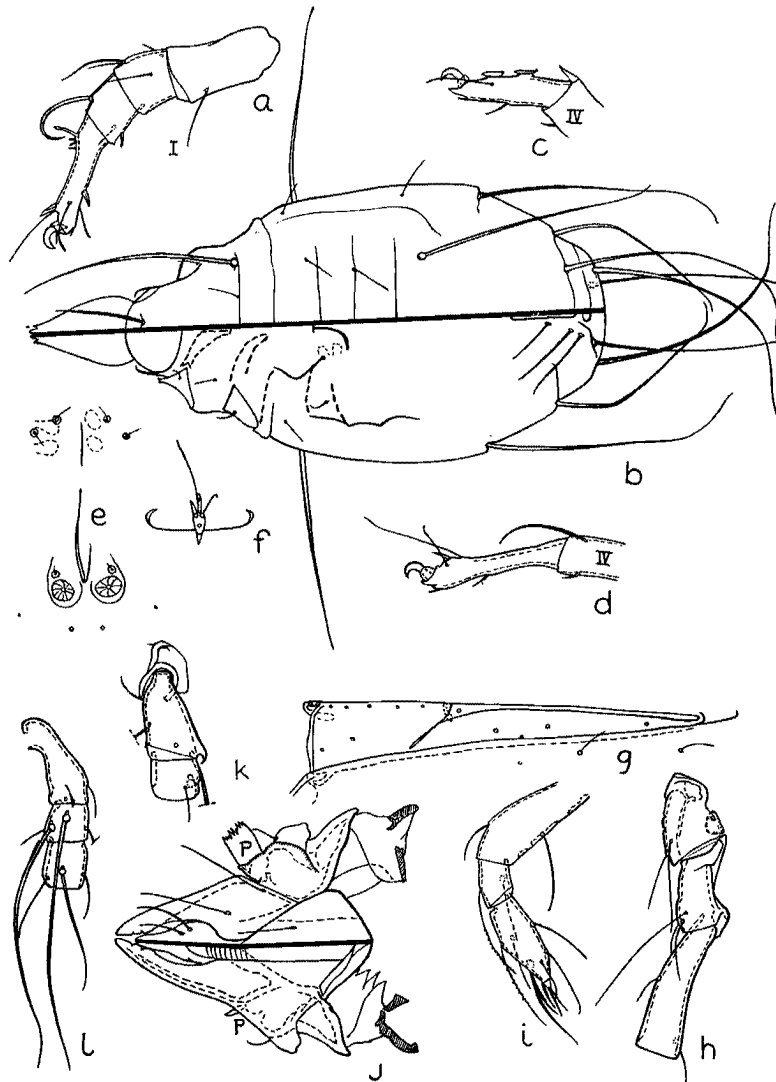


FIGURE 1.—*Caloglyphus introitus*, new species, adult: *a*, legs I, ratio  $\times 200$ ; *b*, dorso-ventral aspects, mouth parts indicated, legs omitted, ratio  $\times 100$ ; *c*, tarsi IV of male, ratio  $\times 200$ ; *d*, tarsi IV of female, ratio  $\times 200$ ; *e*, anogenital region of male, ratio  $\times 150$ ; *f*, tarsi I end view, ratio  $\times 200$ . *Indotritia lebronnci tahitiana*, new subspecies, adult: *g*, anogenital area, ratio  $\times 100$ ; *h*, femora IV to coxae IV, ratio  $\times 150$ ; *i*, palp, ratio  $\times 200$ ; *j*, labium, maxillae, and palpigers, with adjacent connectives, ratio  $\times 150$ ; *k*, femur and genua I, ratio  $\times 120$ ; *l*, femur, genua I and tibia I, ratio  $\times 120$ .

Resembles *Tyroglyphus krameri*<sup>3</sup> in reduced tarsal armature, but differs in the much longer abdomen bristles, much shorter vertex bristles, and small bristle of tarsus IV of males. Differs from *Tyroglyphus sumatrensis*<sup>4</sup> in the short bristle of tarsus IV of males, the short humeral bristle, and different cephaloprothoracic bristles; from *Rhyzoglyphus grossipes* of Tahiti<sup>5</sup> in its slender tarsi and single midtarsal bristle, from *Rhyzoglyphus longipes* of Tahiti<sup>5</sup> in its single midtarsal bristle; from the genotype in its much longer body bristles and much reduced pedal armature.

This very much reduced pedal armature and peculiar anal armature might warrant placing this species in a new genus. Due to my lack of familiarity with this group, I am unable to determine this point at present. As it most closely resembles, in its pedal armature, the genotype of *Cosmoglyphus*,<sup>6</sup> it would belong in that genus.

#### TRIBE EUPHTHIRACARINI

##### *Indotritia lebronneci tahitiana*, new subspecies (fig. 1, *g-l*).

Differs from the species in that the anterior adanal bristles are more posteriad; the pseudoforamen more anteriad, so that it is nearly midway between the anterior and middle bristles; posterior bristles quite near edge of plate; pseudoforamen of notogaster on transverse plane about midway between anterior and middle adanal bristles and slightly anteriad of adanal pseudoforamen; pseudostigmatic organs similar to the species, 117  $\mu$  long, but lid with much more diagonal lateral edge so that anterior corner is nil; genital cover bristle as the species; distal segment of palp (fig. 1, *i*) with bristle close to stout, curved bristle also stout and curved, not fine and straight as in the species.

Tahiti: Papenoo Valley, 5 miles from sea, altitude 650 feet, October 29, 1928, 1 cotype, A. M. Adamson, slide 33M11; Papenoo Valley, 7 miles from sea, altitude 350 feet, October 25, 1928, 1 cotype, A. M. Adamson, slide 33M7; Hitiaa, altitude 1500 feet, November 20, 1928, southwest of Hitiaa village, 1 specimen, A. M. Adamson, slide 33M12.

Legs I of this species are much stouter than legs II to IV; the femur bears a hooked carina on dorsal face (fig. 1, *k, l*, shows the carina in edge view). The genuals bear two very long, stout bristles which reach beyond distal end of unguis (fig. 1, *l*). Trochanters III (fig. 1, *h*) and IV bear a long, fine bristle and a closely spaced pair of shorter, finer bristles. Coxae III (fig. 1, *h*) and IV bear two fairly long, fine bristles.

Figure 1, *j*, illustrates the palpiger as being quite distinct from the mandibles though fused to them; posterolaterad of the palpiger is a triangular process to which is attached a hyaline membrane connecting these mouth parts to the abdomen by means of slender ribs (cross-hatched in fig. 1, *j*). The ligula appears transversely grooved on ventral face.

<sup>3</sup> Berlese, Antonio, Indagini sulle metamorfosi di alcuni acari insetticoli: Atti Reale Ist. Ven. Sci., Let. Art., ser. 5, vol. 8, p. 49, 1882; Acari, Myriapoda et Scorpiones hucusque in Italia reperta, fasc. 49:10.

<sup>4</sup> Oudemans, A. C., Acari, in Arthur Wichmann, Résultats de l'expédition scientifique Néerlandaise à la Nouvelle Guinée en 1903, vol. 5, Zool., p. 138, 1906.

<sup>5</sup> Berlese, Antonio, Centuria quinta di Acari nuovi: Redia, vol. 14, p. 144, 1920.

<sup>6</sup> Oudemans, A. C., Acarologische Aanteekeningen 112: Ent. Ber., vol. 8, p. 358, 1932.