Acarologia is proudly non-profit, with no page charges and free open access

Please help us maintain this system by encouraging your institutes to subscribe to the print version of the journal and by sending us your high quality research on the Acari.

Subscriptions: Year 2020 (Volume 60): 450 €
http://www1.montpellier.inra.fr/CBGP/acarologia/subscribe.php
Previous volumes (2010-2018): 250 € / year (4 issues)
Acarologia, CBGP, CS 30016, 34988 MONTFERRIER-sur-LEZ Cedex, France
ISSN 0044-586X (print), ISSN 2107-7207 (electronic)

The digitalization of Acarologia papers prior to 2000 was supported by Agropolis Fondation under the reference ID 1500-024 through the « Investissements d’avenir » programme (Labex Agro: ANR-10-LABX-0001-01)

Acarologia is under free license and distributed under the terms of the Creative Commons-BY-NC-ND which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author and source are credited.
HABEOGULA CAUDA (ACARI: UROPODINA), A NEW GENUS AND SPECIES OF MITE FROM THE ARMY ANT LABIDUS PRAEDATOR (F. SMITH) 1

BY Richard J. ELZINGA 2

TAXONOMY UROPODINA

ABSTRACT: A new genus and monotypic species is described. The mite possesses a unique posterior dorsal holdfast by which it attaches to the cervix of its army ant carrier.

TAXONOMY UROPODINA


The taxonomic of Uropodine mites associated with neotropical army ants has been studied extensively. Sellnick (1926) published the first major article of these mites and created four genera. Since this monumental publication, several revisions have been made and numerous species have been described (see Elzinga, 1981). Presently, these mites are classified into five genera, based primarily on modifications for enhancing phoresy. Elzinga (1978) categorized these phoretic adaptations into four types of holdfast mechanisms — claws and suckers, toothed cuticular, ridged cuticular, and everted cuticular. The latter type of holdfast was found only on two specimens of undescribed species found attached to the ventral part of the cervix of worker Labidus praedator army ants.

The purpose of this publication is to describe this species and, because of its uniqueness, create a new genus. The genus proposed is Habeogula, the name derivation signifying the affinity of this mite to the body region ventral to the ant head. Elements of the mite dorsum elongate posteriorly into a holdfast (Figs. 1, 2), structurally unique to any arthropod, that clamps around the ant’s cervix while the depressed venter permits the mite to fit flush around the hypostomal-labial region of the ant head. So positioned, the mite’s mouthparts become aligned directionally with the ant’s.

The nearest genus to Habeogula is Coxequesoma since both have the ventral plate divided with the posterior portion fusing with the anal plate, the posterior “mushroom-shaped” dorsal setae in the rows (Elzinga, 1982) at terminus of indented posterior dorsal margin (Fig. 2), and bodies heavily

1 Contribution N° 88-486-J from the Kansas Agricultural Experiment Station, Manhattan, Kansas 66506. Supported by Experiment Station Project H033.
2 Department of Entomology, Kansas State University, Manhattan, Kansas 66506.

Acarologia, t. XXX, fasc. 4, 1989.
1. — Oblique view of Holotype, seen under SEM. 2. — Posterior view showing holdfast. 3. — "Mushroom-shaped" setae. 4. — Porous area on metapodal plate.
sclerotized and with punctations. It is easily distinguished from *Coxequesoma*, however, by the peculiar holdfast mechanism, having metapodal plates fusing with both the lateral plates and posteriorly to the dorsum, the presence of an aggregation of pores on the metapodal plate, and having the posterior elements of the endopodal-sterneal plate complex indistinguishably fused medially behind the genital plate.

**Habeogula cauda** n. sp.

**Female**

Body brown; sclerotization heavy, with obvious punctations; 806 μm long, 580 μm wide. Other pertinent measurements include: genital plate 210 μm long, 140 μm wide; distance from anterior edge sternum to anus 415 μm; length anterior ventral plate 90 μm, width 130 μm; length posterior holdfast 176 μm.

**Dorsum**: moderately convex; covered by single dorsal plate except for 2 sclerotized posterior plates in holdfast, attached medially where 12 short "mushroom-shaped" setae in 3 rows are located (Fig. 3); no anterior prolongation present as in *Planodiscus*; 87 pairs of large setae uniformly distributed, each with strong lateral barb about 1/3 distance from tip; 3 pairs anterior dorsal setae greatly elongate; 2 sections of dorsum elongated posteriolaterally to form unique everted cuticular holdfast (ELZINGA, 1978); 41 pairs of short marginal setae.

**Venter** (Fig. 5): Concave, recessed into cavity formed by encircling dorsum; sternal plate separate from ventral plate, with endopodal elements fusing completely medially behind genital plate, lacking punctuation; 4 pairs of setae and 2 pairs lyriform pores on sternal plate; genital widest in middle third, not pointed anteriorly, with median punctations; metapodal plates enlarged, fusing posteriolaterally with dorsum into part of holdfast organ, lacking carinae and punctations, with porous median field (Fig. 4); ventral plate divided, front plate narrowing posteriorly, with punctations, with 2 pairs of short setae near posterior border, posterior plate fused with anal plate and greatly reduced, with 1 pair ventral and 3 pairs anal setae; lateral plates indistinguishably fused to metapodal plates, presence indicated only by 3 pairs of short lateral setae; exopodal area with punctations near leg articulations.

**Gnathosoma**: Chelicerae as in *Coxequesoma-Planodiscus* complex; corniculi somewhat flattened dorsoventrally, with pointed tip; distal hypostomal setae longest, lacking barbs, 2nd next longest with 5 barbs, 3rd shortest, with 3 barbs; gnathosomal setae shorter than 3rd hypostomal setae, with 3 barbs; tectum similar to *Coxequesoma*.

**Legs**: 6-segmented leg I, 7-segmented legs II-IV (not including pretarsus but including basitarsus); coxae I contiguous, about 3 times as long as broad, much longer than coxae II-IV; tarsi I lacking claws; femora II-IV with reduced hyaline flanges; legs fold into reduced fovialae pedales.
Male: Unknown

Types

Holotype female with the following data: Ecuador: Oriente, 00°24' S, 76°36' W, 30.IX.1964, H. R. Hermann Jr, Host: Labidus praedator, colony D-342. Paratype female with same data. Types deposited in the author’s collection.

Distribution and Hosts

This species is known only from 2 female specimens from the type locality and host.

ACKNOWLEDGMENTS

I thank Dr H. R. Hermann, Jr. (Univ. Georgia) for collecting the ant and mite specimens and Dr C. W. Rettenmeyer (Univ. Conn.) for providing them to me. I am also appreciative to Dr. E. Horber (Kans. State Univ.) for the German abstract and Mr. J. Krchma (SEM Laboratory, Kans. State Univ.) for making the photographs.

REFERENCES


Paru en Décembre 1989.