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 2019 (Volume 59): 450 €
http://www1.montpellier.inra.fr/CBGP/acarologia/subscribe.php
Previous volumes (2010-2017): 250 € / year (4 issues)
Acarologia, CBGP, CS 30016, 34988 MONTFERRIER-sur-LEZ Cedex, France

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.
REDISCOVERY OF THE GENUS *COLEOTYDAEUS* BERLESE, 1910
(ACARI : ACTINEDIDA : TYDEIDAE)

BY M.-I. NOTI & H. M. ANDRE

**SUMMARY:** The genus *Coleotydaeus* Berlese, 1910 has been found in Zaïre for the first time since its original description. A redescription of the genus based on a new species is given.

**INTRODUCTION**

The genus *Coleotydaeus* was described by Berlese (1910) to accommodate a single species, *C. rhombicus* Berlese 1910, that was collected in the muscinal surroundings of Palerme in Italy (Palaearctic Region). The species presents unique and obvious characters, including a dorsal anus located behind a transverse suture. It has never been collected since its original discovery.

Unfortunately, the description of *C. rhombicus* by Berlese is overly concise and there is no information presented on the chaetotaxy. Furthermore, the type material examined by Baker (1965) is in poor condition and the setal pattern of the legs and body could not be seen (Baker, 1965). Baker (1965) was, however, able to illustrate the chaetotaxy of the palp, tarsus I and genital area (figures 107, 109 and 110 in Baker, 1965). Therefore, it was necessary to recover additional specimens of *Coleotydaeus* in order to provide the missing information. Fortunately, several specimens representing a new species of *Coleotydaeus* were found by the senior author in soil samples collected in Zaïre (Afrotropical Region). They have provided the basis for a redescription of the genus, which is presented below.

*Coleotydaeus* Berlese, 1910

Prodorsum: dehiscence line procurred; no eyes; one pair of bothridia. Opisthosoma: dorsal chaetotaxy: 9 setae (l2, l3, l1 and h2 missing); poroidotaxy: 4; genital organotaxy: Ad (0,7-6-4); DN (2-2); epimeral formulae: Ad (3-1-4-3); DN (3-1-4-2);

1. U.C.L. — Laboratoire d’Écologie et de Biogéographie, 5, Place Croix du sud, B-1348 Louvain-la-Neuve, Belgique.
2. Section Entomologique, Musée royal de l’Afrique centrale, B-1980 Tervuren, Belgique.

*Acarologia*, t. XXXI, fasc. 1, 1990.
coxal organ present; two pairs of diachile slots in the deuteronymph. Legs: chaetotaxy: I (12-5-4-5-1), II (8-2-4-4-1), III (7-2-3-3-1), IV (7-2-1-2-0) in the female and deuteronymph; eupathidia on tarsus I: (te) and (p); solenidotaxy: 3; femur IV undivided. Palp: (7-2-2) + ω, with a double eupathidium at the tip of the tarsus. Two pairs of subcapitular setae and two pairs of adorals as in other tydeid genera. An outstanding character related to the disappearance of setae h1 and h2 is the dorsal position of the anus. Furthermore, the anal aperture is protected by a special operculum well apparent in dorsal view (Fig. 1A, 1D, 2B). The genital opening is terminal, with large shield-like lips which bear only the most posterior three pairs of aggenitals in adults (Fig. 2B, 2C). The opening is T-shaped as in other genera. Transverse sutures on the opisthonotum suggest the presence of dorsal shields, as earlier noted by Berlese (1910) and Baker (1965). It must be stressed, however, that the areas delineated by these sutures are thinly striated and not smooth as are the shields found in other actinedid families such as Stigmaeidae. In contrast to adults, the striation of the deuteronymph is homogeneous over all the idiosoma. Coleotydaeus belongs to the subfamily Tydaeolinae. 

Species-type: C. rhombicus Berlese, 1910.

Coleotydaeus lebruni n. sp.¹
(Fig. 1 A-D, 2 A-C and 3 A-E)

Total length of adults: 222,1 μm (min. 207,9 μm and max. 233,1 μm);
Total length of deuteronymphs: 189,6 μm (min. 185,6 μm and max. 193,6 μm);
Dorsal striation longitudinal on the prodorsum and opisthosoma. Most idiosomal setae are lanceolate and serrate except for the sensilla, which are much longer and strongly pilose. Claws and empodia typical for the family. 

Diagnosis.

Little information is available on the type-species which, as noted earlier, is in poor condition. Analysis of the drawings published in Baker (1965) reveals that at least two characters distinguish the new species from Coleotydaeus rhombicus. First, the terminal setae on the palp tarsus of C. rhombicus are much longer (ca 1/3 of the palp tarsus length) than in C. lebruni (less than 1/5 the palp tarsus length) (compare our fig. 3E to Baker's (1965) fig. 107). In addition, the length of solenidion w1, relative to seta (f1), is greater in C. lebruni than in C. rhombicus (compare fig. 3A to fig. 109 in Baker 1965).

Type-series.

1 female holotype, Luiswishi, sample n° IA3, coll. M.-I. NOTI, deposited in the Musée royal de l'Afrique centrale (slide n° MRAC 170-726).
5 female paratypes (ibidem, same sample, in MRAC).
1 deuteronymph paratype (ibidem, same sample, in MRAC).

Other material.

18 females and 4 deuteronymphs from the same area in MRAC. Some of these should go to other collections: USNM, Biosystematics Research Centre (Ottawa), British Museum (Nat. Hist.) (London), Muséum national d'Histoire naturelle (Paris).

ECOLOGY

All soil samples were collected in the area of Luiswishi, 28 km from Lubumbashi (11°29'05" S, 27°36'10" E). C. lebruni was found at several stations previously described by NOTI and leBRUN (1987) in dry evergreen forest.

C. lebruni was collected during both the dry and rainy seasons. 18 females collected were ovigerous. As already observed by Berlese (1910), there is only one big egg per female, which suggests a low fecundity.

¹. This species is named for Prof. Ph. LEBRUN under whom this work was achieved.
Fig. 1: Coleotydaeus lebruni n. sp.
A. — Dorsal view; B. — Trichobothria and setae p2; C. — Dorsal setae d3; D. — Dorsal view of the anal area.
Fig. 2: Coleotydaeus lebruni n. sp.
A. — Lateral view; B. — Lateral view of the ano-genital area: the anal operculum (hatched area) is slightly lift up; C. — Genital area and epimeron IV.
Fig. 3: Coleotydaeus lebruni n. sp.
A. — Leg I (antiaxial view); B. — Leg II (id.); C. — Leg III (id.); D. — Leg IV (id.); E. — Palp (id.).
ACKNOWLEDGEMENTS

The authors thank Prof. M. BOURGEOS and Ph. LEBRUN for their interest and for their encouragement to follow studies in acarology. They also thank Prof. Y. COINLEAU and G. W. KRANTZ for their suggestions and interesting remarks.

REFERENCES


Paru en Mai 1990.