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Review of the species of *Coleocydnus* J. A. LIS, with a description of *C. sicardi* n. sp. from Madagascar (Hemiptera: Heteroptera: Cydnidae)

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ABSTRACT. A review of the species of the Afrotropical genus *Coleocydnus* J. A. LIS, 1994 is presented. *C. sicardi* n. sp. is described from Madagascar, and a key to known species is provided. Female spermatheca is studied for the first time for all the species of the genus.

Key words: entomology, taxonomy, review, new species, key to species, spermatheca, Madagascar, Hemiptera, Heteroptera, Cydnidae, *Coleocydnus*.

The genus *Coleocydnus* was described for *C. ernsti* from Rwanda and Zaire (LIS 1994), as the first Afrotropical burrower-bug with coleopteroid hemelytra. Then, the second species of this unique genus was described from Madagascar (LIS 1996).

The present paper provides a short review of known species, a description of a new one, and a key to all species of the genus.

ABBREVIATIONS. DBUO – Department of Biosystematics, University of Opole, Poland; MNHN – Muséum National d'Histoire Naturelle, Paris, France; SMNS – Staatliches Museum für Naturkunde, Stuttgart, Germany; TLM – Tiroler Landesmuseum, Innsbruck, Austria.

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Genus *Coleocydnus* J. A. Lis

Coleocydnus J. A. Lis, 1994: 187. Type species by original designation: *Coleocydnus ernsti* J.A. Lis, 1994.

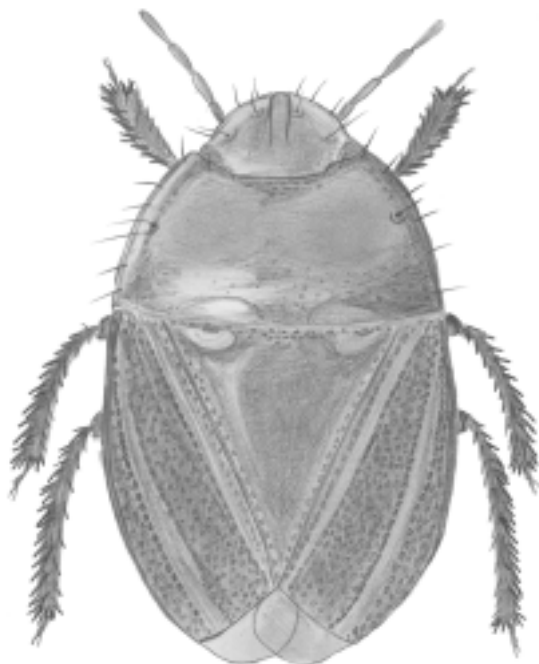
DIAGNOSTIC CHARACTERS

Head broader than long, semicircular in outline, its margins with setigerous punctures bearing only hair-like setae, peg-like setae never present; clypeus free; ocelli absent; antennae 5-segmented. Pronotum broader than long, its anterior margin angularly concave centrally, the posterior margin almost straight. Scutellum very long, clearly longer than wide, its apex strongly elongated and narrowed. Hemelytra coleopteroid with very short membrane; clavo-corial suture absent. Meso- and metapleural evaporatoria large (Fig. 6), apex of peritreme with tooth posteriorly, ostiolar opening invisible in a ventral view.

***Coleocydnus ernsti* J. A. Lis**

(Figs 1, 4-5)

Coleocydnus ernsti J.A. Lis, 1994: 190.



1. *Coleocydnus ernsti*: habitus

DIAGNOSTIC CHARACTERS

Body (Fig. 1) reddish-brown to dark castaneous, 4.95-5.65 mm in length, 3.09-3.53 mm in width. Head impunctate; clypeus slightly concealed by paraclypei laterally, bearing no subapical pair of setigerous punctures; each paraclypeus with a row of 3-4 submarginal setigerous punctures bearing hair-like setae; eyes narrow and small, ocular index 4.40-4.80; 3rd antennal segment 1.04-1.18 times longer than the 2nd segment; rostrum reaching mid coxae. Pronotum trapezoid in outline, its disc sparsely punctate; each lateral margin with a row of 5-6 submarginal setigerous punctures bearing hair-like setae. Propleuron alutaceous, depression with small punctures. Scutellum impunctate, except for a basal and lateral sparse rows of punctures. Mesocorium densely, evenly punctate, punctures large and deep, of equal size (Fig. 1); costa convex, separated from exocorium in its basal two thirds, without or with a single setigerous puncture; membrane reaching or slightly extending beyond the tip of abdomen. Abdominal sterna punctate laterally. Male paramere as in Fig. 4; aedeagus without median carina ventrally. Female spermatheca with large proximal flange, and dilated pump region (Fig. 5).

MATERIAL EXAMINED

RWANDA: Holotype male, Prov. Cyangugu, Nyakabuye, Regenwald, 20-25 I 84, HEISS (DBUO); Paratype female, the same data as the holotype (DBUO).

ZAIRE: Paratype female, Zaire (Congo), Provinz Kivu, Mt. Kahuzi, 220 m, 27 V 85, MÜHLE, ex coll. E. HEISS (TLM).

DISTRIBUTION

Hitherto recorded only from Rwanda and Zaire.

***Coleocydnus madagascariensis* J. A. LIS**

(Figs 2, 6-7)

Coleocydnus madagascariensis J. A. LIS, 1996: 347.

DIAGNOSTIC CHARACTERS

Body (Fig. 2) black, 6.85-7.45 mm in length, 4.19-4.44 mm in width. Head punctate with numerous tiny, hardly visible punctures; clypeus entirely free, without a subapical pair of setigerous punctures; each paraclypeus with a row of 3-4 submarginal setigerous punctures bearing hair-like setae; eyes narrow, moderately large, ocular index 3.50-4.20; 3rd antennal segment only about 0.85-0.95 times as long as the 2nd segment; rostrum reaching mid coxae. Pronotum subquadrate in outline, its disc sparsely punctate; each lateral margin with a row of 5 submarginal setigerous punctures bearing hair-like setae. Propleuron alutaceous, with numerous wrinkles on its anterior convexity, and numerous coarse punctures in the depression. Scutellum with numerous well separated coarse punctures, larger

than those of the pronotum. Mesocorium densely punctate only posteriorly (Fig. 2), punctures of different sizes, small to large; costa flattened, separated from exocorium only in its basal third, bearing two setigerous punctures; membrane small, flap-like, not reaching the tip of abdomen. Abdominal sterna coarsely punctate and transversely striated laterally. Female spermatheca with small proximal flange, and elongated pump region (Fig. 7).

MATERIAL EXAMINED

MADAGASCAR: Holotype female, Madagascar, Foret de Kirindy, März 1990, leg. M. BUTTERWECK et al. (SMNS); 3 paratype females, the same data as the holotype (SMNS, DBUO).

DISTRIBUTION

Known only from Madagascar, so far.



2. *Coleocydnus madagascariensis*: habitus

***Coleocydnus sicardi* n. sp.**

(Figs 3, 8-9)

DIAGNOSIS

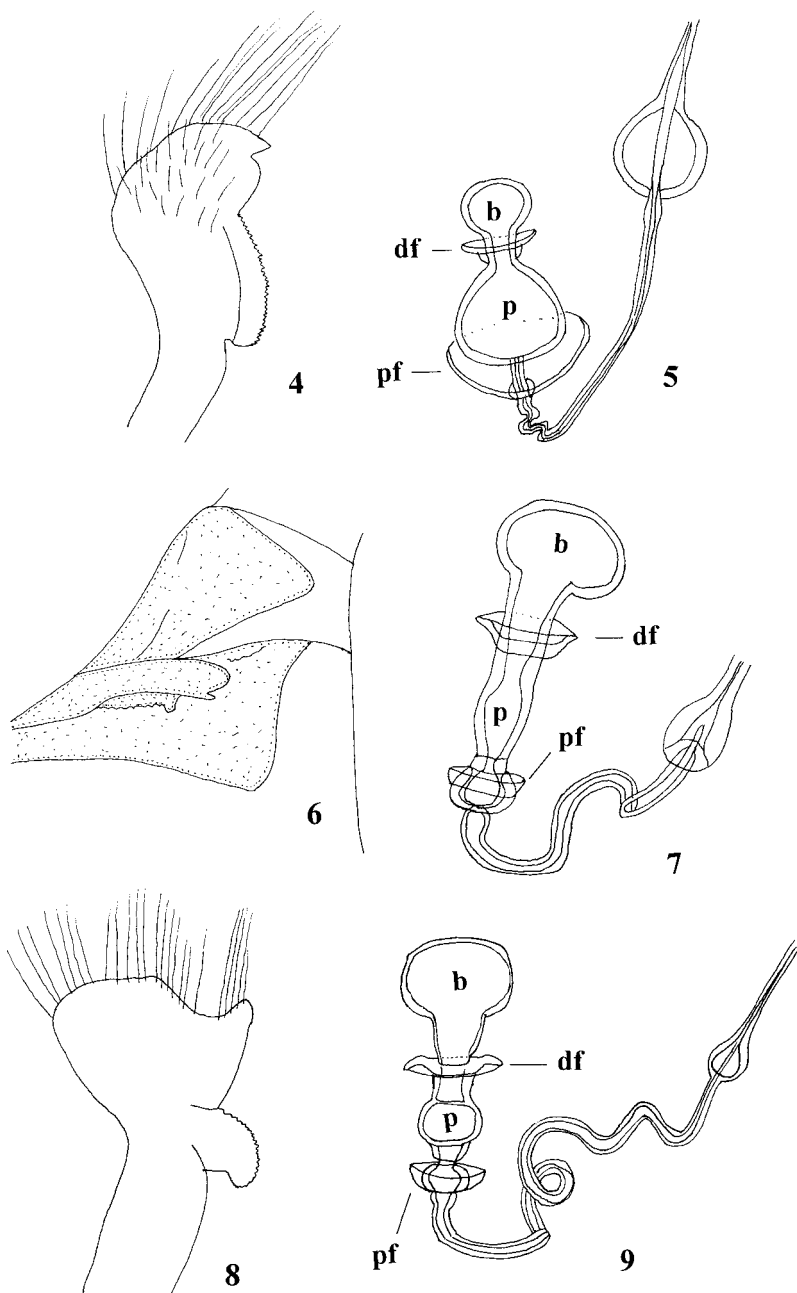
This new species is similar to *C. madagascariensis* in its general outline and body size, but can be easily separated from the latter by the convex costa, separated from exocorium in its basal two thirds (costa of *C. madagascariensis* is flattened and separated from exocorium only in its basal third). Moreover, the corium of *C. sicardi* bears coarse large punctures of the same size, whereas the corium of *C. madagascariensis* has punctures of different sizes, from very small and shallow to large and coarse.

DESCRIPTION

Body (Fig. 3) castaneous to piceous, 6.24-6.93 mm in length, 3.56-4.16 mm in width.



3. *Coleocydnus sicardi* n. sp.: habitus



4-5. *Coleocydnus ernsti*, 6-7. *Coleocydnus madagascariensis* J. A. Lis, 8-9. *Coleocydnus sicardi* n. sp.: 4, 8 – paramere, 5, 7, 9 – spermatheca (b – bulb, p – pump, df – distal flange, pf – proximal flange), 6 – evaporatoria

Head impunctate or with a few tiny, hardly visible punctures; clypeus as long as paraclypei, entirely free, without a pair of submarginal setigerous punctures; each paraclypeus with a submarginal row of 3 setigerous punctures bearing hair-like setae; eyes moderately large, pale brown to reddish-brown, ocular index 3.20-3.80; antennae yellowish-brown to dark brown, 3rd antennal segment 1.00-1.14 times longer than the 2nd segment; rostrum pale brown to dark brown, extending beyond mid coxae.

Pronotum subquadrate, its disc almost impunctate, bearing only a few irregularly scattered medium-sized punctures; each lateral margin with a submarginal row of 5 setigerous punctures bearing hair-like setae. Propleuron alutaceous, wrinkled on its anterior convexity, and bearing numerous coarse punctures in the depression and the posterior convexity.

Scutellum very long, strongly narrowed apically, its disc convex, impunctate except for a basal row of small punctures and lateral rows of large, deep, coarse punctures.

Corium coarsely punctate with large, deep punctures, its basal and medial part sparsely punctate or impunctate (Fig. 3); clavo-corial suture absent, exocorium with puncturation denser than that of remaining parts of corium; costa convex, separated from exocorium in its basal two thirds, and bearing a single (sporadically two) setigerous puncture; membrane brown, small, triangular, reaching or almost reaching the tip of abdomen.

Legs brown to dark brown, tarsi yellowish-brown to pale brown, tibial spines castaneous to piceous.

Abdominal sterna conspicuously coarsely punctate laterally. Male paramere as in Fig. 8; aedeagus with median carina ventrally. Female spermatheca with small proximal flange, and slightly dilated pump region (Fig. 9).

MATERIAL EXAMINED

Holotype male: [MADAGASCAR]: Madagascar, Coll. SICARD, 1930, Muséum Paris (MNHN). Paratypes: 2 males 2 females, the same data as the holotype (MNHN, DBUO); 1 female, Madagascar Est, Régions de Tamatave, Andevorante et Beforona, Dr G. BOUET, 1905, Muséum Paris (MNHN).

ETYMOLOGY

The species is named after the collector of the holotype specimen.

KEY TO THE SPECIES

1. Body smaller, about 4.9-5.7 mm in length and 3.1-3.5 mm in width; eyes small, ocular index about 4.40-4.80; mesocorium densely evenly punctate (Fig. 1); male paramere as in Fig. 4; female spermatheca with large proximal flange, and dilated pump region (Fig. 5) *ernsti*

- Body larger, about 6.2-7.5 mm in length and 3.6-4.5 mm in width; eyes large, ocular index about 3.20-4.20; mesocorium with irregular puncturation, its basal and medial part weakly punctate or impunctate (Figs 2-3); male paramere and female spermatheca not as above 2.
- 2. Costa convex, separated from exocorium in its basal two thirds; corium with large coarse punctures of the same size (Fig. 3); scutellar disc impunctate, except for a basal row of small punctures and lateral rows of large, coarse punctures; male paramere as in Fig. 8; female spermatheca with slightly dilated pump region (Fig. 9) **sicardi**
- Costa flattened, separated from exocorium only in its basal third; corium with punctures of different sizes, from very small to large (Fig. 2); scutellar disc with well separated coarse punctures; male paramere not as above; female spermatheca with elongated pump region (Fig. 7) **madagascariensis**

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- , 1996. *Coleocydnus madagascariensis* n. sp. from Madagascar (Hemiptera: Heteroptera: Cydnidae). Genus (Wrocław), 7: 347-350.