The Latin American Species of the Genus Corticeus Piller and Mitterpacher (Coleoptera: Tenebrionidae, Hypophloeini). Part I. The Species Described by Reitter and Pic, and Description of Two New Species

Author(s): H. J. Bremer and C. A. Triplehorn


Published by: The Coleopterists Society

Stable URL: http://www.jstor.org/stable/4009291

Accessed: 01/01/2011 18:15

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at http://www.jstor.org/page/info/about/policies/terms.jsp. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at http://www.jstor.org/action/showPublisher?publisherCode=cole.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.


H. J. BREMER
Gundolfstraße 18
D-69120 Heidelberg
Germany

AND

C. A. TRIPLEHORN
Museum of Biological Diversity
The Ohio State University
1315 Kinnear Road
Columbus, OH 43212-1192
U.S.A.

Abstract

The seven Latin American species of Corticeus Piller and Mitterpacher (= Hypophloeus Fabricius) described by Pic and Reitter are evaluated. Corticeus mexicanus Reitter = Hypophloeus meridianus Pic, new synonymy; Corticeus mexicanus Reitter = C. cylindricus Reitter, new synonymy and Corticeus erratus Reitter, new synonymy; Corticeus mexicanus Reitter argentinus Pic = Hypophloeus argentinus Pic, new status; Corticeus (= Hypophloeus) paulostriatus Pic, new combination = Corticeus tensicollis Triplehorn, new synonymy; Hypophloeus dufaui Pic = Iccius rufotestaceus (Champion) [Tenebrionidae, Diaperini], new status. Two new Corticeus species are described: Corticeus notialis Bremer and Triplehorn, from Brazil and Peru, and Corticeus abditus Bremer and Triplehorn, from Brazil.

No revision of the Latin American members of the genus Corticeus Piller and Mitterpacher (1783) exists. This is partly due to the rarity of material in collections, and additionally it was very difficult to gain access to the types of previously described species. Many of the original descriptions are inadequate to recognize the species. With two exceptions (Corticeus rufipes Fabricius and Corticeus erratus Reitter) the authors were able to examine the types of all described species. There are no doubts about the identity of C. rufipes. The description of C. erratus, however, is inadequate and the type specimen was destroyed during WWII (see discussion of C. erratus). The descriptions of the four species described by Pic are also insufficient to identify the species.

This paper contains as essential parts remarks on the species of Pic and Reitter, and a description of two new species. In a later paper, a revision of all species occurring in Latin America based on material in collections not yet studied will be attempted. This will be part of a revision of the species of the Hypophloeini of the world of which those of the Corticeus north of Mexico (Triplehorn 1990) and of those of the Ethiopian faunal region (Bremer 1985, 1987, 1995) have already been published.

The following species have been described from Latin America (species
described as *Hypophloeus* Fabricius are here recorded as *Corticeus* Piller and Mitterpacher:

*Corticeus rufipes* Fabricius 1801:558; Champion 1886:171 (Mexico).
*Corticeus mexicanus* Reitter 1878:191; Champion 1886:172 (Mexico).
*Corticeus longicornis* Champion 1886:172 (Mexico).
*Corticeus puncticollis* Champion 1886:172 (Guatemala).
*Corticeus pallidipennis* Champion 1886:173 (Mexico, Guatemala).
*Corticeus crassicornis* Champion 1886:173 (Guatemala).
*Corticeus sordidus* Champion 1913:162 (Guatemala).
*Corticeus meridanus* Pic 1914:15 (Venezuela).
*Corticeus argentinus* Pic 1915:223 (Argentina).
*Corticeus paulostratiatus* Pic 1945:8 (Cuba).
*Corticeus dufaui* Pic 1945:7 (Guadeloupe).
*Corticeus coynei* Triplehorn 1970:47 (Honduras).
*Corticeus rosei* Triplehorn 1970:49 (Mexico).
*Corticeus tensicollis* Triplehorn 1979:46 (Florida, U.S.A.).
*Corticeus tuberculatus* Triplehorn 1979:48 (Cuba).
*Corticeus plaumanni* Bremer 1990:316 (Brazil).
*Corticeus merkli* Bremer 1992:175 (Brazil).
*Corticeus humilis* Bremer 1992:178 (Brazil).

**Remarks on Previously Described Species**

*Corticeus mexicanus* Reitter 1878:191
*Corticeus cylindricus* Reitter 1878:192
*Corticeus erratus* Reitter 1894:16 (nomen nudum), new synonymy

*Hypophloeus meridanus* Pic 1914:15

The identity of *C. mexicanus* Reitter was established by Triplehorn based on the study of one syntype. The following notes have been published: (Triplehorn 1979:48) "*Corticeus mexicanus* is of stouter proportions than *C. tensicollis*, the pronotum is shorter (width = 0.8 length) and the ventral surface is more coarsely punctured. Males of *C. mexicanus* are very distinct in having the medial portion of the basal abdominal sternum flattened and rugosely sculptured between and behind the metacoxae with a distinct median carina ending in a tubercle. In addition, there is a dense, conspicuous patch of short, pale setae on the prosternum immediately behind the head. These two structures are absent in the female of *C. mexicanus* and in both sexes of *C. tensicollis*.

According to Reitter (1878) the type specimen of *C. erratus* Reitter was deposited in the private collection of Mr. vom Bruck in Krefeld, Germany. This collection was, according to "Revue d’Entomologie, Caen. Tome I, 1882, p. 240," transferred to the Zoological Museum of the University of Bonn in the year 1882. This Museum with the collections was entirely destroyed in 1945 by war events, resulting in the loss of the type (M. Uhlig, pers. comm.). However, in the Natural History Museum of the Humboldt-University of Berlin there are 4 more specimens of the original series of this species which were determined as "cylindricus" by an entomologist named Moritz. It is highly
probable that they belong to the same series as the type specimen of C. cylindricus Reitter. These specimens from the Berlin Museum are indeed C. mexicanus Reitter, therefore, it is highly probable that C. erratus Reitter refers to C. mexicanus Reitter. Corticeus mexicanus and C. cylindricus were described by Reitter in the same paper with C. mexicanus described on the page before C. cylindricus. Because of the form of the pronotum and other features, C. mexicanus may show some degree of variation, and it is possible that Reitter described specimens of the same species under different names. The description is not detailed enough for an identification. In the collection of the Hungarian Natural History Museum, Budapest, there is another old specimen determined by Zoltan Kaszab as C. erratus Reitter; however, it is also C. mexicanus Reitter.

Both authors studied the type specimen of C. meridanus Pic which is deposited in the Muséum National d’Histoire Naturelle, Paris. It is a female specimen of C. mexicanus Reitter s.str. (see Corticeus argentinus Pic). Corticeus mexicanus Reitter s.str. has a broad distribution, occurring from Mexico to Bolivia and Venezuela.

**Corticeus mexicanus argentinus (Pic), new status**

_Hypophloeus argentinus Pic 1915:223._

H. J. B. examined the well preserved type specimen ($) of C. argentinus deposited in the Muséum National d’Histoire Naturelle, Paris. It bears the following labels: République Arg., Rio Parana, Territoire de Missions, Juillet. Coll. Wagner; type; H. argentinus Pic [Pic’s handwriting]; Muséum Paris, Coll. M. Pic. Three more specimens of this taxon were also studied, two in the collections of the Muséum National d’Histoire Naturelle, Paris, and one in the Bremer collection; they bear the following labels: “Blumenau {26°56’S–49°03’W}, S. O. Brasilien; Reitter.” A fourth specimen studied is in the collection of the Deutsches Entomologisches Institut, Eberswalde-Finow, Germany, and is labelled “Sao Paulo, J. Metz, Coll. Kraatz.”

Nearly all the features of this taxon, including the sexual characters of the male, are identical with C. mexicanus Reitter. The only exception is a microreticulation of the elytra which is always present in mexicanus and induces a reduced shine, which is not present in argentinus. The latter taxon is characterized by the absence of microreticulation and, therefore, by a clear brightness of the elytra. We regard Corticeus argentinus Pic as a subspecies of Corticeus mexicanus Reitter occurring in the southern part of Brazil and the northern part of Argentina.

_Corticeus loebli_ Bremer (1995, from Ivory Coast, Africa, is very similar to this taxon, sharing with it the general form, luster, and a tubercle on the basal abdominal sternite in the male. C. loebli has shorter elytra, a somewhat shorter pronotum, and is black in color.

**Corticeus paulostriatus (Pic), new combination**

_Hypophloeus paulostriatus Pic 1945:7._

_Corticeus tensicollis_ Triplehorn 1979:46, new synonymy

The type specimen of _Hypophloeus paulostriatus_ Pic (1914), deposited in the Paris Museum was studied by H. J. B. The type specimen is severely damaged by Anthrenus, although the head with the antennae, parts of the pronotum, the elytra, the metasternum, the sternites, and one hind
leg are preserved. These remnants allowed a determination and the conclusion of its synonymy with \textit{Corticeus tensicollis} Triplehorn. Pic’s type is labeled as “Cuba, paulostriatius n. sp. (Pic’s handwriting), type.”

\textit{C. paulostriatius} and \textit{C. rufipes} are widespread, occurring in subtropical and tropical areas of America. These species plus three from tropical Africa, \textit{C. compressicornis} Gebien, \textit{C. christae} Bremer \textit{C. brendelli} Bremer, form a group of closely related species sharing a very similar form and the same sexual dimorphism so as to suggest grouping them together as a subgenus of \textit{Corticeus}.

\textit{Iccius rufotestaceus} (Champion)

\textit{Hypophloeus dufaui} Pic 1945:7, new synonymy

\textit{Hypophloeus dufaui} Pic (1945) is a synonym of \textit{Iccius rufotestaceus} (Champion 1913), also described from Guadeloupe. The three syntypes of \textit{H. dufaui} deposited in the Muséum National d’Histoire Naturelle, Paris, have been studied by H. J. B. The 3 specimens had been originally glued on one piece of paper, but are now separated and glued on separate cards. They are labeled: “Guadeloupe; Dufaui n. sp. (Pic’s hand writing); type (Pic’s hand writing).” One specimen has been labeled as lectotypus, the other two as lectoparatypes. \textit{Hypophloeus dufaui} is not a species of the genus \textit{Corticeus} but of the genus \textit{Iccius} Champion (Diaperini). In the collection of the Paris Museum there are three more undetermined specimens of an \textit{Iccius} species from Guadeloupe.

\textit{Corticeus notialis} Bremer and Triplehorn, new species

Fig. 1

\textbf{Description.} Length: 5.3–7.8 mm. Width: 1.5–2.0 mm. Elongate, slender, subcylindrical, dark reddish-brown, glabrous, shining; antennae and legs reddish-brown. \textit{Head} uniformly finely, sparsely punctured; clypeus well defined, apical margin truncate, lateral margins reflexed, sinuately joining genae which are strongly reflexed above antennal orbits; antennae moderately slender, segments 4–10 transverse, forming loosely articulated club, terminal segment elongate and pointed: Eyes finely faceted, extremely large, especially ventral lobes which are separated by approximately width of mentum; ventral surface of head practically impunctate except between eyes where punctures are distinct and closely spaced. Width of head to width of frons 2.30–2.47:1; width of frons to width of one eye 1.38–1.68:1. \textit{Pronotum} longer than broad (length to maximum width = 1.27–1.41:1), moderately convex; lateral margins feebly arcuate, briefly sinuate just before base, slightly divergent from base to apex (maximum width to minimum width = 1.18–1.25:1), apical margin rounded anteriorly, angles broadly rounded, basal margin broadly bisinuate, angles rectilinear; lateral and basal margins strongly beaded; surface uniformly finely and sparsely punctured. \textit{Elytra} distinctly wider than pronotum at base, length to width 2.19–2.39:1; length of elytra to length of pronotum 2.14–2.27:1, sides parallel, surface obscurely punctate-striate on disc, confusedly punctured laterally, all intervals perfectly flat with punctures subequal to those of striae. \textit{Pygidium} finely, densely punctured. \textit{Ventral surface} finely, densely punctured except posterior portion of metasternum almost impunctate; mesosternum coarsely, rugosely punctured; terminal abdominal sternite rugosely punctured, bearing a terminal, shiny triangular tubercle and median carina toward apex; prosternal process narrow between coxae, expanded and strongly convex behind, apex grooved laterally and not prolonged, appearing trilobed.

\textbf{Types.} Holotype and 50 paratypes: Brazil, Nova Teutonia, Santa Catarina, September (no year given), F Plaumann. Holotype and paratypes in MCZC, paratypes in OSUC and Bremer Collection; 8. XII. 1955; –Santa Catarina, Nova Teutonia, Brazil, F Plaumann (1 Paratype; Muséum National d’Histoire
Fig. 1. *Corticeus notialis*, habitus, length, 7.2 mm.
Fig. 2. *Corticeus abditus*, habitus, length, 2.5 mm.

Naturelle, Paris); Amazones, IQUITOS [Peru], M. De Mathan (1 paratype, Muséum National d'Histoire Naturelle, Paris).

**Remarks.** This is one of the larger Neotropical species of *Corticeus*. It differs from *C. rufipes* *C. mexicanus*, and *C. mexicanus argentinus* in having the apical angles rounded (not acutely produced anteriorly as in those species). Except for these, all other species known from Latin America are much smaller than *C. notialis*.

*Corticeus abditus* Bremer and Triplehorn, **new species**

Fig. 2

**Description.** Length: 2.03–2.51 mm. Width: 0.48–0.67 mm. Elytra, antennae and legs pale yellow; head, pronotum, scutellum, pygidium and ventral surface yellow-brown; surface markedly microreticulate with reduced luster. Elytra parallel-sided; pronotum with anterior and posterior angles rounded, with very large and prominent eyes. **Head:** eyes medially slightly margined; ventrally overlapping base of maxillae by 1/3. Genae only posteriorly developed, apically not really separable from clypeus, lateral margins not reflexed. Clypeus crosswise somewhat vaulted, lengthwise slightly convex; suture between clypeus and frons markedly depressed; frons lengthwise slightly vaulted, cross-
wise plain. Ratio width of head/width of frons 2.07–2.14:1; ratio of width of frons/width of one eye 1.56–1.75:1. Clypeus and frons with flat, small punctures separated by 1- to 2-times width of one puncture. Neck with large punctures ventrally. Pronotum slightly longer than broad, ratio 1.11–1.16:1; crosswise markedly convex; lengthwise roughly plain. Apical margin rounded anteriorly, sides parallel; basal margins laterally sloping against elytra, middle portion straight. Surface anteriorly and in middle with many small, narrowly elongated punctures; posteriorly these elongate punctures directed more to sides and not as anteriorly lengthwise. Elytra crosswise markedly convex, with straight sides; shoulders right-angled; bases straight, narrowly margined. Length to width 2.14–2.25:1; length of elytra to length of pronotum 2.05–2.14:1. Confusedly punctate, punctures not aligned in striae; punctures separated by 2- to 4-times their diameters. Pygidium with very small punctures which are base of very short setae (visible at a magnification of 50×). Prosternum in front of procoxae crosswise convex, laterally oblique and flat, densely punctured. Prosternal process deflexed, with shallow median depression, just behind coxae. Mesosternum only laterally with coarse punctures. Median suture of metasternum visible to anterior third; laterally densely punctured. Basal three sternites finely, distantly punctured. On fourth sternite punctures becoming larger, narrower; fifth sternite densely punctured. Antennae short, length of 1 antenna to width of head 3.1:2.9, first two segments markedly thicker than third, which is as long as second, last five segments transverse, forming narrowly articulated club; terminal segment somewhat elongate. Legs short, protibia with sharp edge laterally; inner side straight, with sharp tooth apicodistally; mesotibia straight, outside apicodistally with a distinct edge; metatibia straight. Metatarsomere 4 somewhat longer than tarsomeres 1–3.

**Types.** Holotype and 2 paratypes; “S. Catarina [Brazil], Nova Teutonia, 29, XII.35, F Plaumann leg.” Holotype and one paratype in the Zoologische Staatssammlung, Munich, Germany, one paratype in the collection of The Ohio State University, Columbus, Ohio, U.S.A.; 2 paratypes in the British Museum of Natural History, labelled “Sao Paulo” and “Amazon, Pascoe Coll. 93–60”.

**Remarks.** *Corticeus abditus* is closely related to *C. plaumanni*. However, *C. abditus* is markedly smaller than *plaumanni*, the antennae are clearly longer and more loosely articulated in *C. plaumanni*, the sides of the pronotum are arcuate in *C. plaumanni* but subparallel in *C. abditus*; and the punctures of the pronotum of *C. plaumanni* are dense and round, whereas those of *C. abditus* are very small and elongate.

**Acknowledgments**

We gratefully acknowledge the support of Dr. Claude Girard, Muséum National d’Histoire Naturelle, Paris, France, who supplied the types of Pic and also undetermined *Corticeus* specimens from Latin America for study, to Dr. M. Baehr, Zoologische Staatssammlung, Munich, Germany, to Dr. L. Zerche, Deutsches Entomologisches Institute, Eberwalde-Finow, Germany, and to Dr. O. Merkl, Hungarian Natural History Museum, Budapest, Hungary for supplying determined and undetermined material and for copies of the original descriptions of Pic and Reitter. We are also very obliged to Dr. M. Uhlig, Museum of Natural History of the Humboldt-University, Berlin, who gave us the information about the fate of the private collection of Mr. vom Bruck in which the type of *Corticeus erratus* Reitter was originally deposited. The habitus drawing of *C. notialis* (Fig. 1) was prepared by Adam Rubinstein.

**Literature Cited**


(Received 16 June 1998; accepted 25 September 1998)