

## Revalidation of *Calocomus rugosipennis* LUCAS, 1857 (Coleoptera, Cerambycidae, Prioninae)

By Antonio SANTOS-SILVA, Noël MAL and Alain DRUMONT

### Abstract

The study of specimens of the genus *Calocomus* indentified as *C. morosus* WHITE, 1850 from Argentina and Brazil and deposited in the Institut Royal des Sciences Naturelles, Brussels and the Museum of Zoology, São Paulo, demonstrated the validity of *C. rugosipennis* LUCAS, 1857 as a distinct species from the former one. *Calocomus rugosipennis* is redescribed and figured and distinguishing characters are given. The sympatry of both taxa, at least in Argentina, excludes the possibility that the two taxa are subspecific.

**Key words:** Coleoptera, Cerambycidae, Prioninae, Calocomini, South America, taxonomy.

### Résumé

Bon nombre de spécimens du genre *Calocomus* provenant d'Argentine et du Brésil sont déterminés dans les collections comme *C. morosus* WHITE, 1850. L'étude des collections des musées de Bruxelles (Institut Royal des Sciences Naturelles) et de São Paulo (Museum of Zoology) a permis de mettre en évidence la validité de *C. rugosipennis* LUCAS, 1857 en tant qu'espèce bien distincte. L'espèce est redécrite et figurée, et les caractères distincts de *C. morosus* sont donnés. Les deux espèces sont sympatriques, au moins en Argentine ce qui permet d'exclure une éventuelle nature subsppécifique par rapport à *C. morosus*.

### Introduction

Calocomini GALILEO & MARTINS, 1993 is a small tribe of Prioninae that comprises a single genus, *Calocomus* AUDINET-SERVILLE, 1832, revised recently by GALILEO & MARTINS (1994). Those authors considered four species in the genus:

*C. desmarestii* (GUÉRIN-MÉNEVILLE, 1831) (= *C. hamatiferus* LACORDAIRE, 1832; = *C. lunuliferus* DRAPIEZ, 1837; = *C. bravardi* BURMEISTER, 1861; = *C. desmaresti caripariensis* TIPPMANN, 1960; = *C. desmaresti* ab. *bimaculatus* TIPPMANN, 1960; = *C. desmaresti* ab.

*melancholicus* TIPPMANN, 1960);

*C. kreuchelyi* BUQUET, 1840 (= *C. lycius* BUQUET, 1840);

*C. rondigeri* TIPPMANN, 1951;

*C. morosus* WHITE, 1850 (= *C. rugosipennis* LUCAS, 1857; = *C. coriaceus* FAIRMAIRE, 1864; = *C. coriaceus* BURMEISTER, 1865).

The study of specimens identified as *C. morosus* WHITE, 1850 from Argentina and Brazil has demonstrated that *C. rugosipennis* LUCAS, 1857 is a distinct species with a partially different geographical distribution.

The collection acronyms used in this study are as follows:

IRSNB = Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium;

MNHN = Muséum National d'Histoire Naturelle, Paris, France;

MZSP = Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil.

### *Calocomus rugosipennis* LUCAS, 1857, revalidated (Figs. 1-6)

*Calocomus rugosipennis* LUCAS, 1857: 181; GEMMINGER & HAROLD, 1872: 2783 (cat.); GOUNELLE, 1909: 592 (cat.); LAMEERE, 1909: 13 (syn.).

*Calocomus morosus* MELZER, 1919: pl. 8, fig. 21.

*Calocomus morosus* (part) LAMEERE, 1909: 33; 1913: 52 (cat.); 1919: 100; MELZER, 1919: 106; CHIESA-MOLINARI, 1942: 424; BLACKWELDER, 1946: 554 (cat.); MONNÉ & GIESBERT, 1994: 10 (cat.); GALILEO & MARTINS, 1994: 495; MONNÉ, 1995: 37 (cat.); DI IORIO *et al.*, 2003: 16, fig. 3; 2005: pl. 6, fig. 3; MONNÉ & HOVORE, 2005: 10 (cat.); MONNÉ, 2006: 40 (cat.); MONNÉ & HOVORE, 2006: 9 (cat.).

Integument dark-brown to black; tarsi (entirely or in

part) brown or light-brown (sometimes all tarsi dark-brown); scape and pedicel dark-brown to black; color of antennomeres variable, but usually gradually lighter from antennomere IX (sometimes most antennomeres are clear); elytra and scutellum dark-brown.

*Male* (Figs. 1, 2). Head with a deep, wide furrow between the eyes, gradually shallower and narrower towards the occiput; pilosity moderately long and abundant; punctation of dorsal surface coarse and confluent; ocular carina low but distinct between the middle and the posterior ocular edge; distance between upper ocular lobes from 0.8 to 1.1 times the greatest width of scape; distance between lower ocular lobes from 2.0 to 2.4 times the greatest width of scape. Genal apex triangular (sometimes rounded). Hypostomal area well delimited, depressed near gula, strongly elevated close to mentum, finely and abundantly granulated; pilosity long, finely and moderately abundant. Mandibles coarsely, deeply, confluent and profusely punctate on dorsal face and laterally. Antennae with twelve (more frequently) or thirteen (less frequently) segments, reaching, or almost reaching, the apical third of elytra; last antennomere not or only weakly divided, or (less frequently) distinctly divided.

*Pronotum* coarsely, profusely, deeply and confluent punctate; pilosity yellowish, moderately long and sparse, denser laterally and on central area. Prosternum with pilosity yellowish, very profuse. Prosternal process wide, convex or almost flat in central area; apex distinctly enlarged and subtriangular or centrally projected into a rounded lobe. Scutellum large, subtriangular, glabrous or with sparse short hairs; apex narrowly rounded; length of exposed part behind the prothoracic hairs from 0.8 to 0.9 the greatest width (sometimes only slightly longer - *ca.* 1.1 times). Elytra glabrous, narrowed towards apex; outer apical angle rounded and sutural angle slightly projected or with short spine; punctures coarse (finer towards apex), deep and very profuse. Metasternum and metepisternae with yellowish pilosity, very profuse, except on triangular central area that is glabrous or almost glabrous.

*Ventrite I* (Fig. 5) finely and moderately profusely punctate; ventrites II-IV sparsely or moderately sparsely punctate on central area and distinctly punctate laterally; pilosity of ventrites I-V moderately long, recumbent and profuse, mainly laterally. Lateral faces of metatibiae flat and dorsal face very narrow.

*Female* (Figs. 3, 4). Antennae with eleven articles, reaching or just surpassing the basal third of elytra. Ventrites glabrous and very finely and sparsely punctate (punctures somewhat coarser and more abundant on

apex of ventrite V).

**DIMENSIONS IN MM (MALE/FEMALE):** Total length (from apex of antennal tubercles to elytral apex), 22.3-37.0/29.3-34.5; prothoracic length (central area), 3.5-6.0/5.0-6.3; prothoracic width (between the apices of lateral angles), 9.1-14.4/11.5-13.8; humeral width, 10.0-15.6/13.8-16.0; elytral length, 15.6/24.6/20.9-25.0.

**TYPE, TYPE LOCALITY:** Holotype male, from "Brésil intérieur", deposited in the MNHN.

According to PAPAVERO (1971), Castelnau arrived at Rio de Janeiro (Brazil) on 17 June 1843, and leaving from there, crossed several Brazilian states until leaving Brazil to Bolivia. Subsequently, on December 1846, he entered Brazil again through Tabatinga (Amazonas) and on 5 April 1847, he left the country bound for French Guiana. Thus, it is impossible to know in which region of Brazil the holotype of *C. rugosipennis* was actually collected.

**COMMENTS:** GOUNELLE's work (1909), which was not mentioned in MONNÉ's catalogue (2006), was the first to mention a precise locality for the species: Jataí (Goiás, Brazil).

LAMEERE (1909) synonymized *C. rugosipennis* with *C. morosus* and recorded: "M. Gounelle, qui a rapporté l'Insecte de Goyaz et qui a pu comparer ses exemplaires avec des individus provenant de la République Argentine, considère qu'il n'y a pas de différence entre l'espèce *rugosipennis* et l'espèce *coriaceus*, toutes deux synonymes du *morosus* de White, dont le nom a la priorité". GOUNELLE (1909) did not discuss anything about *C. rugosipennis*, merely mentioning the work in which the species was described. We were unable to find any work in which GOUNELLE commented on the species of LUCAS (1857) and *C. coriaceus* Fairmaire and/or *C. coriaceus* Burmeister (LAMEERE did not specify which of these two latter species). Besides, the works of GOUNELLE and LAMEERE were published in 1909. As GOUNELLE (1909) used *C. rugosipennis* as a valid species, it is improbable that he had actually recorded the synonymy, pointed out by LAMEERE (1909) in a work previous to 1909.

We examined photographs of the holotype female of *C. morosus*, that allowed us to conclude that *C. coriaceus* Fairmaire and *C. coriaceus* BURMEISTER, besides *C. morosus* m. *nigromaculatus* HEYROVSKY, 1963 and *C. morosus* m. *lameerei* HEYROVSKY, 1963, really are synonyms of White's species.

HEYROVSKY (1963) mistakenly wrote: "Chez la forme typique, les élytres sont noires. Mais il existe aussi des

exemplaires dont les élytres sont brun-rouge et portent une maculle apicale triangulaire noire. Je nomme cette forme pas encore décrite: m. *nigromaculatus* n.". On the elytral color of the holotype of *C. morosus*, WHITE (1850) recorded: "ferruginous, in some places darkish brown".

GALILEO & MARTINS (1994) commented on the elytral color in males of *C. morosus* (translated): "... and elytra, brown-yellowish" and "triangular dark spot at apical region of elytra". When commenting on the females, the authors did not say what was the elytral color, but it is possible to infer that they affirmed that it is variable, because they commented on the general coloring (translated): "General color dark-brown-reddish to black". Thus, it is possible to conclude that the description of the coloration in males refers only to *C. morosus*, but in the case of females, involves the two species: *C. morosus* and *C. rugosipennis*.

MONNÉ (2006) listed some references to *C. morosus*, but it is now not possible to know the species involved (*C. morosus*, *C. rugosipennis* or both): FRENZEL, 1891: 331 (distr.); BRUCH, 1912: 183; BOSQ, 1934: 336; 1943: 22; 1947: 9; PROSEN, 1944: 23; 1947: 317; BUCK, 1959: 579 (distr.); DUFFY, 1960: 57 (hosts); MONNÉ, 2002: 10 (cat. hosts); DI IORIO, in CORDO *et al.*, 2004: 76 (hosts).

*Calocomus rugosipennis* differs from *C. morosus* in the following respects: elytra black in both sexes (Figs. 1, 3); last antennomere, usually, not or weakly divided (in any specimen examined the division results in a distinctly separate segment); mesosternal process in general more elevated; metasternum and metepisternae of females (Fig. 4) with pilosity longer and more profuse; abdomen of males shorter (Fig. 2); ventrites of males usually with pilosity moderately more profuse (Figs. 2, 5); ventrites of males with punctures sparser, mainly on central region (Figs. 2, 5) (rarely not so); ventrites of females flatter and with punctures very sparse (Figs. 4, 6); lateral faces of metatibiae flat and dorsal face very narrow in both sexes.

In *C. morosus*: elytra in males brown-yellowish with black apical spot (Fig. 7); elytra in females (Fig. 9) brown-yellowish with some irregular areas lighter and other darker; last antennomere frequently divided, forming a distinct antennomere; mesosternal process, in general, weakly elevated; metasternum and metepisternae in females (Figs. 10, 12) with pilosity shorter and less profuse; abdomen of males longer (Fig. 8); ventrites of males usually with pilosity sparser (Figs. 8, 11); ventrites of males with punctures more abundant (Figs. 8, 11); ventrites of females more convex and evidently punctate (Figs. 10, 12); lateral faces of metatibiae, in both sexes, rounded and dorsal face rounded and wide.

Another character that is somewhat constant in males of *C. rugosipennis* is the length of the exposed part of the scutellum (behind the prothoracic hairs) that is approximately as long as the greatest width (Fig. 1). The males of *C. morosus* studied have the length of the scutellum smaller than the greatest width (Fig. 7).

The records of *C. morosus* from Argentina (Jujuy to Rio Negro) and Paraguay must be reviewed to be confirmed or not. Without doubt the species occurs in Argentina but as we have examined specimens of *C. rugosipennis* collected in the area attributed to *C. morosus*, it is necessary to verify whether both species occur throughout that area. We know that, at least partially, this happens, because we studied specimens of both species collected in more proximate localities in Argentina. That fact allows us to conclude that *C. rugosipennis* is not a subspecies of *C. morosus*, because despite both occurring in the same area, we did not find intermediate specimens. Besides, we did not find specimens of *C. morosus* in central and east Brazil where only *C. rugosipennis* is present. It is probable that *C. rugosipennis* may also be present in Bolivia.

GALILEO & MARTINS (1994) recorded *C. morosus* (actually, *C. rugosipennis*) from Mato Grosso do Sul based on the material they studied ["Jaraguá, female symbol, XII.1956, W. Zikán col. (MZSP)"]. However, there are two localities with this same name: one in Mato Grosso and another in Mato Grosso do Sul. Therefore it is not possible to know in which of these two places the specimen was actually collected.

MATERIAL EXAMINED: ARGENTINA, *Jujuy*: Tilcara, male, [no date of collection], Weiser col. (MZSP); male (ex. V. de Salvaza Collection), [no date of collection nor collector's name indicated] (IRSNB). *Salta*: Rosário de La fronteira, female, I.1944, [no collector's name indicated] (MZSP); macho (ex. V. de Salvaza Collection), [no date of collection nor collector's name indicated] (IRSNB). BRASIL, macho (ex. Desbrochers Collection), [no date of collection and collector's name indicated] (IRSNB). *Goiás*: female, [no date of collection], P. Guimarães col. (MZSP); Leopoldo Bulhões, female, XII.1933, R. Spitz col. (MZSP). *Mato Grosso do Sul*: Jaraguá, female, 3.XII.1956, W. Zikán col. (MZSP); Porto Murtinho, female, XII.1929, R. Spitz col. (MZSP). *Minas Gerais*: Uberaba, female (ex. Le Moults Collection), [no date of collection nor collector's name indicated] (IRSNB). *São Paulo*: Batatais, male, 10.XI.1945, F. Lane col. (MZSP); female, X.1946 [no collector's name indicated] (MZSP).

**Key to the species of *Calocomus* [adapted from GALILEO & MARTINS (1994)]**

1. Elytra densely and almost uniformly punctate throughout surface.....2  
 - Elytral punctation dense only on basal third, finer or absent in the remaining portion. Southern Bolivia, Paraguay, Argentina .....  
 .....*C. desmarestii* (GUÉRIN-MÉNEVILLE, 1831)
- 2(1). Antennae in females with 20-22 articles (males unknown). Colombia.....  
 .....*C. kreuchelyi* BUQUET, 1840  
 - Antennae with less than 20 articles in both sexes.....3
- 3(2). Ratio of humeral width/elytral length *ca.* 1:3; elytral margins subparallel up to apical curvature (TIPPMANN, 1951). Peru.....  
 .....*C. rondigeri* TIPPMANN, 1951  
 - Ratio of humeral width/elytral length *ca.* 1:2; elytral margins more convergent towards apex .....4
- 4(3). Dorsal face of metatibiae very narrow and lateral faces flat. Brazil (Goiás, Mato Grosso do Sul, Minas Gerais, São Paulo), Argentina (Jujuy, Salta).....*C. rugosipennis* LUCAS, 1857  
 - Dorsal face of metatibiae large and lateral faces rounded. Bolivia, Argentina .....  
 .....*C. morosus* WHITE, 1850

**Acknowledgements**

We would like to express our appreciation to Conrad P.D.T. Gillett (Norwich, United Kingdom) for reviewing the English part of this paper.

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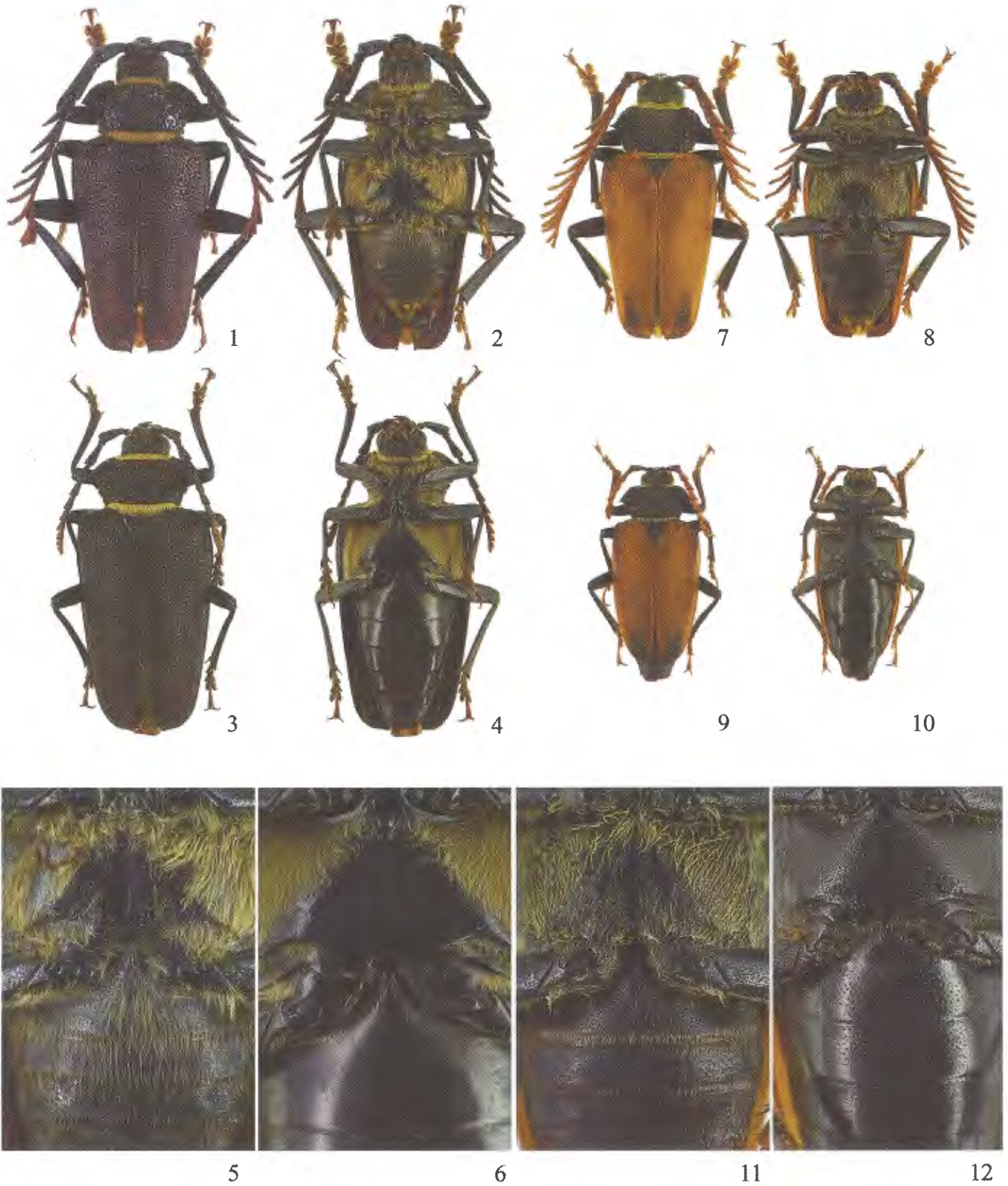
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Photos N. Mal, 2010

Figs 1-6. – *Calocomus rugosipennis* LUCAS, 1857: 1. male, dorsal view; 2. male, ventral view; 3. female, dorsal view; 4. female, ventral view; 5. male, metasternum and ventrites; 6. female, metasternum and ventrites.

Figs 7-12. – *Calocomus morosus* WHITE, 1850: 7. male, dorsal view; 8. male, ventral view; 9. female, dorsal view; 10. female, ventral view; 11. male, mestasternum and ventrites; 12. female, metasternum and ventrites.

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Antonio SANTOS SILVA

Museum of Zoology

University of São Paulo

P.O. box 42494, 04218-970, São Paulo

SP, Brazil

(e-mail: toncriss@uol.com.br)

Noël MAL and Alain DRUMONT

Institut Royal des Sciences Naturelles

Department of Entomologie

29, rue Vautier

B-1000 Bruxelles

(e-Mail: noel.mal@skynet.be / alain.drumont@  
naturalsciences.be)