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## A NEW SPECIES OF *PHYSOPLEURUS* LACORDAIRE FROM FRENCH GUIANA (COLEOPTERA, CERAMBYCIDAE, PRIONINAE)

NORBERT DELAHAYE<sup>1</sup>  
GÉRARD LUC TAVAKILIAN<sup>2</sup>

### ABSTRACT

*Misidentified as* *Physopleurus crassidens* (Bates, 1869) since the beginning of the 20<sup>th</sup> century by some authors, a new species from French Guiana is herein described: *Physopleurus ubirajarai* sp. nov.

KEY-WORDS: Coleoptera; Cerambycidae; Prioninae; Macrotomini; *Physopleurus*; Taxonomy; South America.

### INTRODUCTION

The systematic history of the genus *Physopleurus* Lacordaire, 1869 was perfectly processed in 2003 by Santos-Silva & Martins, who described two new species, and listed 10 species in the genus. In 2005, the number of species was reduced to nine, because of the description of the genus *Hisarai* Santos-Silva & Martins, with *Physopleurus seripierriae* Santos-Silva & Martins, 2003 as type species. Two new species were described in 2006 and 2009, respectively *P. rafaeli* Santos-Silva, from Brazil, and *P. erikae* Santos-Silva & Martins, from Colombia. Chalumeau (2010) described *P. swifti*, synonymized in the same year with *P. rugosus* (Gahan, 1894) by Tavakilian (2010).

Currently, the genus *Physopleurus* includes 12 species (the new species included):

*Physopleurus amazonicus* (Fragoso & Monné, 1995), from Peru, Brazil and French Guiana;

*Physopleurus crassidens* (Bates, 1869), from Peru and Brazil;

*Physopleurus dohrnii* Lacordaire, 1869, from Venezuela;

*Physopleurus erikae* Santos-Silva & Martins, 2009, from Colombia;

*Physopleurus exiguus* Santos-Silva & Martins, 2003, from Bolivia and Brazil;

*Physopleurus longiscapus* Lameere, 1912, from Bolivia, Colombia, Ecuador, Peru, and Brazil;

*Physopleurus maillei* (Audinet-Serville, 1832), from Brazil, Paraguay, and Argentina;

*Physopleurus rafaeli* Santos-Silva, 2006, from Brazil;

*Physopleurus rugosus* (Gahan, 1894); from French Guiana and Brazil;

*Physopleurus ubirajarai* sp. nov., from French Guiana;

*Physopleurus tritomicrus* Lameere, 1912, from French Guiana and Brazil;

*Physopleurus villardi* (Lameere, 1902), from Guatemala, Ecuador, and Peru.

Regarding the specimens from French Guiana similar to *Physopleurus crassidens*, we noticed that only a few authors have confused them with Bates's species.

<sup>1</sup> 65, rue des Ebisaires, F-78370 Plaisir. E-mail: delahayen@mac.com

<sup>2</sup> Attaché, Département Systématique et Evolution, Muséum national d'Histoire naturelle, Entomologie, 45 rue Buffon,

F-75231 Paris cedex 05. E-mail: tava@mnhn.fr

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Among them, nearly all in catalogues or checklists, as for example: Prudhomme (1906) (first record to French Guiana); Monné & Giesbert (1994); Morvan & Morati (2011); Monné (2015).

## MATERIAL AND METHODS

The acronyms used in the text are as follows: **MNHN**, Muséum national d'Histoire naturelle, Paris, France; **MZSP**, Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil; **IRD**, Institut de Recherche pour le Développement, Paris, France (Gérard Tavakilian); **SEAG**, Société entomologique Antilles-Guyane, French Guiana; **HMBV**, Private Collection of Henri-Michel Baudet, Vaugrigneuse, France; **JTS**, Private Collection of Julien Touroult, Soyaux, France; **NDP**, Private Collection of Norbert Delahaye, Plaisir,

France; **PHDM**, Private Collection of Pierre-Henri Dalens, Montjoly, French Guiana; **RMLC**, Private Collection of Robert Minetti, La Ciotat, France.

## RESULTS

### Taxonomy

#### *Physopleurus crassidens* (Bates, 1869) (Fig. 1)

*Malldonhoplus crassidens* Bates, 1869: 45 ([Holotype] Ega, MNHN).

*Malldonhoplus crassidens*; Gemminger & Harold, 1872: 2768 [Catalogue, error] (Ega).

*Stenodontes (Malldonhoplus) crassidens*; Lameere, 1902: 85 [Revision, error] (Amazons).

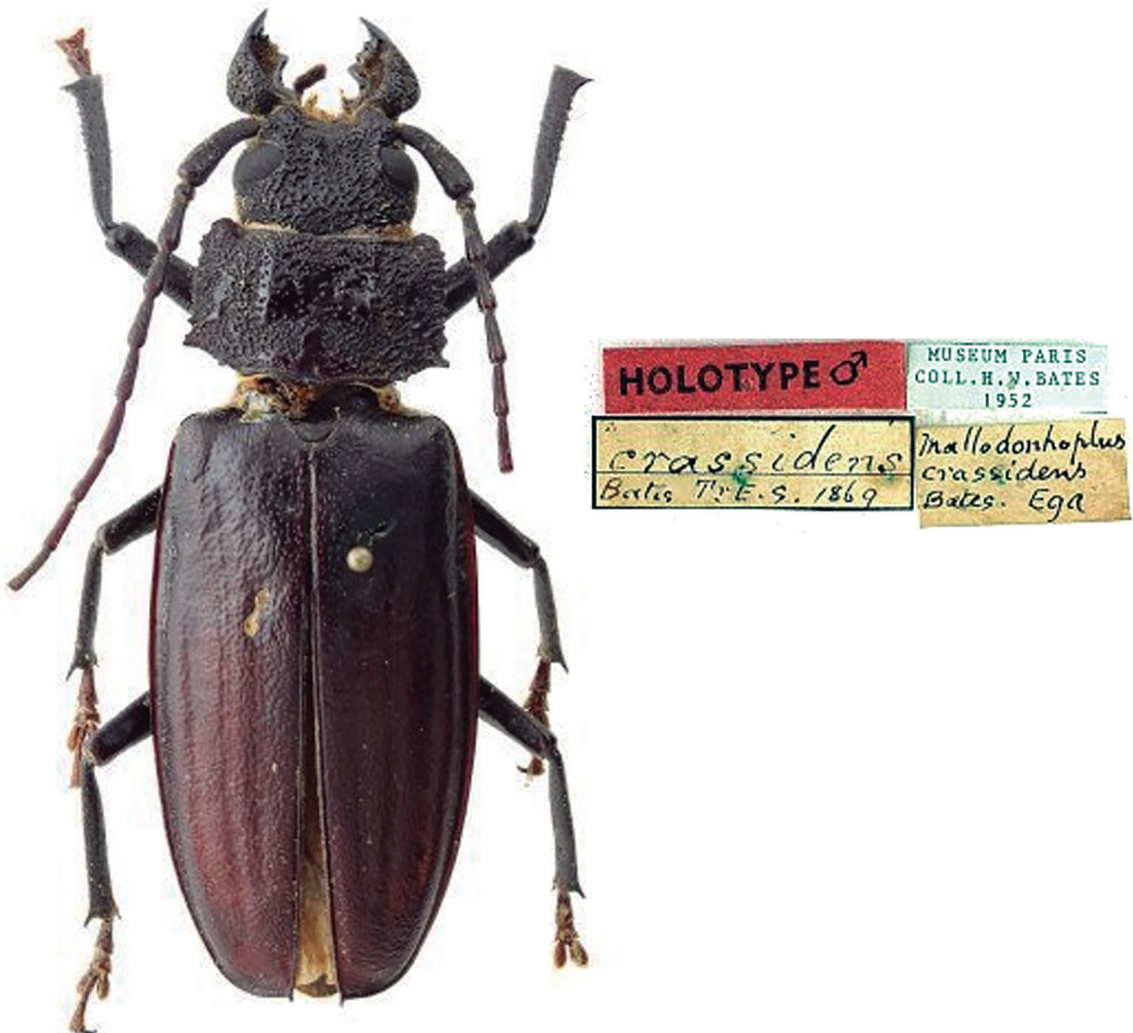


FIGURE 1: *Physopleurus crassidens*, holotype male, dorsal habitus and labels (MNHN).

*Stenodontes (Physopleurus) crassidens*; Lameere, 1912: 126 [Revision].

*Physopleurus crassidens*; Lameere, 1913: 15 [Catalogue] (Amazon: Ega) (Lameere, 1919: 35 (Amazonia: Ega); Melzer, 1919: 49 (Brazil: Amazonas); Monné & Giesbert, 1994: 6 [Catalogue] (nw Brazil (AM), French Guiana) (part); Monné, 1995: 15 [Catalogue] (Brazil (Amazonas); Santos-Silva & Martins, 2003: 250, fig. 23 (holotype ♂) and 24 (♀) [key] (Brazil (Amazonas, Mato Grosso)); Martins *et al.*, 2006: 266 [Distribution, key] (Amazonia, Rio Cueiras. Brazil (Amazonas, Mato Grosso)); Morvan & Morati, 2006: 6 [Catalogue] (Brazil (Amazonas), French Guiana) (part); Santos-Silva & Martins, 2009: 101, fig. 3 [key] (Brazil (Amazonas, Mato Grosso)); Jeniš & Santos-Silva, 2010: 46 [key, ♀]; Santos-Silva & Galileo, 2011: 40 [Distribution] (Brazil (Amazonas)); Galileo *et al.*, 2014: 11 [Distribution] (Peru, Loreto: Iquitos) [sp. nov. in french Guiana].

Santos-Silva & Martins (2003) did not mention French Guiana as a place where occurs *Physopleurus crassidens*. However, Galileo *et al.* (2014: 11) recorded: "We believe that the record attributed to French Guiana by Monné & Giesbert (1994) was likely a misidentification error as all French Guiana specimens identified as *P. crassidens*, which we have examined, are an undescribed species." Nevertheless, the species was not described.

***Physopleurus ubirajarai* sp. nov.**

(Figs. 2-3)

*Physopleurus Dorbni*; Prudhomme, 1906: 33 [Distribution, misapplied, misspelling].

*Physopleurus crassidens*; Monné & Giesbert, 1994: 6 [Catalogue, misapplied] (part); Morvan & Morati, 2006: 6 [Catalogue, misapplied] (part).

*Holotype*: ♂, French Guiana, collected with light trap, Route de Nancibo, pk 6, 18.VIII.1984, *Marc Thouvenot leg.* (Former collection IRD, deposited at MNHN).

*Paratypes*: (18 ♂, 22 ♀, all from French Guiana) 1 ♂, light trap, Grand Boeuf Mort, Saül, 15.VIII.2007, *Pierre-Henri Dalens leg.* (PHDM), 69 mm; 1 ♂, light trap, road Trou Poissons, 11.VIII.2004, *Pierre-Henri Dalens leg.* (PHDM) 64 mm; 1 ♂, light trap, road Trou Poissons, pk 10, 11.VIII.2004, *Pierre-Henri*

*Dalens leg.* (PHDM) 62 mm; 1 ♂, light trap, DZ3 (Régina St-Georges), 31.VIII.1991, *Marc Thouvenot leg.* (IRD) 61 mm; 1 ♂, light trap, road to Kaw, pk 45, 08.IX.1986, *O. Benichou leg.* (Former collection IRD, deposited at MZSP) 57 mm; 1 ♂, road to Belizon, pk 14, 21.VIII.2001 (NDP # 8495) 56 mm; 1 ♂, Petit Saut dam, 03.X.1994, *Norbert Delahaye leg.* (NDP # 467) 54 mm; 1 ♂, road to Kaw, XII.2013 (RMLC) 54 mm; 1 ♂, light trap, Montsinery, 30.VI.1984, *C. Lestrade leg.* (IRD) 53 mm; 1 ♂, light trap, road to Kaw, pk 47, 23.VIII.1987, *Gérard Tavakilian leg.* (Former collection IRD, NDP # 8512) 53 mm; 1 ♂, light trap, Montagne de Fer, pk 15, 17.VIII.1988, *Romain Garrouste leg.* (IRD) 51 mm; 1 ♂, light trap, Roura, 23.VIII.1984, *Marceau leg.* (IRD) 50 mm; 1 ♂, road to Belizon, VII.2013, *Jean-Louis Giuglaris leg.* (NDP # 8515) 48 mm; 1 ♂, road to Kaw, pk 39, VIII.1997 (NDP # 8494) 44 mm; 1 ♂, light



**FIGURE 2:** *Physopleurus ubirajarai* sp. nov., holotype male, dorsal habitus (MNHN).

trap, road Coralie, pk 9, 16.VIII.1990, *Marc Thouvenot leg.* (IRD) 43 mm; 1 ♂, light trap, road to Kaw; pk 41, 25.VII.1995, *Julien Touroult leg.* (JTS); 1 ♂, light trap, Réserve des Nouragues, Saut Pararé, 16/22.VII.2009, *SEAG (Touroult) leg.* (JTS); 1 ♂, light trap, road to Kaw, pk 38, 16.VIII.1996, *Julien Touroult leg.* (JTS); 1 ♀, light trap, Haute Courcibo (DZ EDF), 21.VII.1990, *Jean-Marie Baloup leg.* (Former collection IRD, deposited at MNHN) 70 mm; 1 ♀, light trap, DZ3 (Regina St-Georges), 02.IX.1991, *Marc Thouvenot leg.* (IRD) 70 mm; 1 ♀, light trap, montagne de la Trinité, 08.IX.1988, *Pierre Souka leg.* (Former collection IRD, NDP # 8513) 68 mm; 1 ♀, light trap, Trou du Diable, 16.VIII.1988, *Michel Vialard leg.* (IRD) 68 mm; 1 ♀, light trap, road to Kaw, pk 45, 07.IX.1986, *O. Benichou leg.* (IRD) 66 mm; 1 ♀, light trap, DZ3 (Regina St-Georges), 03.IX.1991, *Marc Thouvenot leg.* (IRD) 60 mm; 1 ♀, Inselberg Hte-Koursibo, 04°18'58,45"N/53°17'10,00"W,

30.X.2013, *Pierre-Henri Dalens leg.* (PHDM) 59 mm; 1 ♀, light trap, road to Kaw, pk 33, 14.VIII.1985, *J.M. Vassal & C. Marschal leg.* (Former collection IRD, deposited at MZSP) 58 mm; 1 ♀, light trap, road Trou Poissons, pk 10, 11.VIII.2004, *Pierre-Henri Dalens leg.* (PHDM) 57 mm; 1 ♀, light trap, road to Montagne Tortue, pk 23+14, 30.VIII.2003, *Pierre-Henri Dalens leg.* (PHDM) 57 mm; 1 ♀, road to Kaw, pk 34, 29.VIII.1984, *Stephane Boucher leg.* (IRD) 57 mm; 1 ♀, road Coralie, pk 21, 09.IX.1990 (HMBV) 57 mm; 1 ♀, road to Belizon, VII.2013, *Jean-Louis Giuglaris leg.* (NDP # 8514) 54 mm; 1 ♀, light trap, Nancibo, pk 7, 06.X.1983, *D. Dauthuille leg.* (IRD) 52 mm; 1 ♀, road to Kaw, pk 37, 16-17.IX.2012, *Alain Audureau leg.* (NDP # 8505) 49 mm; 1 ♀, light trap, road to Kaw, pk 39, 25.XII.1984, *Stephane Boucher leg.* (IRD) 48 mm; 1 ♀, light trap, road to Belizon, pk 15-17, 01.XII.2005, *Julien Touroult leg.* (NDP # 3914) 48 mm; 1 ♀, light trap, road to Kaw, pk 3, 07.XII.1983, *Marc Thouvenot leg.* (IRD) 41 mm; 1 ♀, light trap, road to Kaw, pk 37, 10.IX.1999, *Julien Touroult leg.* (JTS); 1 ♀, light trap, Tonnegrande, 04.XII.2003, *Pierre-Henri Dalens leg.* (JTS); 1 ♀, light trap, road to Saint-Elie, pk 16, 20.VIII.2006, *Julien Touroult leg.* (JTS); 1 ♀, light trap, road to Kaw, pk 36, 16.VIII.1996, *Julien Touroult leg.* (JTS).



FIGURE 3: *Physopleurus ubirajarai* sp. nov., holotype male, ventral habitus (MNHN).

*Description:* Length from 41 to 70 mm (from apex of mandible to apex of abdomen). Elongated, parallel habitus; integument of body, pronotum, elytra, and legs uniformly dark brown; head and prosternum darker.

Head in male very wide, narrower in female; eyes widely separated; in male, distance between upper eye lobes twice width of one lobe; in female, 1.0 times width of one lobe. Mandibles very robust, about as long as scape, coarsely punctate, arcuate outwardly; with sparse, long setae laterally; with long, abundant, reddish setae on inner side. Clypeus, frons and vertex uniformly coarse vermiculate (latter finer toward occiput); genae finely vermiculate; clypeus and genae with slightly dense, reddish pubescence, longer on clypeus; dorsal groove absent on vertex, but distinct near occiput. Mentum finely punctate; with sparse, long setae. Submentum shallowly punctate; with some setae. Gula triangular, concave, smooth on basal third, vermiculate remaining surface; without carina; glabrous.

Antennae 11-segmented; in male, reaching distal half of elytra; in female, reaching basal quarter of elytra; antennal tubercles slightly projected; scape robust, flattened, curved, moderately punctate, not angular at inner apex; antennomere III distinctly longer

than IV-XI; antennomeres IV-X of same length, very sparsely punctate; antennomere XI slightly longer than X;

Pronotum transverse, about twice wider than long; in male, lateral sides sub-parallel; in female, lateral sides rounded; lateral sides crenulate, with long spine near base; disc glabrous, smooth, shiny, finely, sparsely punctate centrally, vermiculate laterally.

Prosternum coarsely punctate, glabrous, except for setae on margins. Prosternal process slightly narrowed, long, rounded at apex. Mesosternum coarsely punctate. Mesepisterna and mesepimera very finely punctate. Metasternum slightly punctate; with fine, slightly dense, long, decumbent pubescence. Metepisterna 5.0 times longer than wide; very finely punctate; with slightly dense, fine, long pubescence.

Scutellum rounded, without suture, distinctly punctate. Elytra parallel-sided; in male, about twice longer than wide at humeri; in female, from 2.5 to 3.0 times longer than wide at humeri; glabrous, except for some long setae; each elytron with two distinct carinae; lateral margins narrowly explanate; dorsal surface slightly convex, uniformly punctate (punctures denser near suture); apex rounded, with sutural angle dentate.

Femora slightly punctate; with very sparse, short setae; ventral side with short, sparse spines. Tibiae more distinctly punctate than femora, but with similar pubescence; protibiae distinctly more spiny than meso- and metatibiae (spines sparser on the latter). Tarsomere I twice longer than II; lobes of tarsomere III rounded.

Abdominal ventrites with decumbent, fine pubescence (sparser from ventrite I to IV); ventrite V distinctly pubescent at apex.

*Distribution:* The new species collected throughout the territory of French Guiana, probably also occurs in Brazil and Suriname.

This new species captured throughout the territory of French Guiana should be present in Brazil or Surinam.

*Remarks:* The new species is easily distinguished from *Physopleurus crassidens* by the denser elytral punctation, by the scutellum without suture and very punctate, by the pubescence of the metepisterna less dense, and also by the shape and punctation of the disc of pronotum wider and very characteristic in male and female. Referring to the key from Santos-Silva (2006), the distance between upper eye lobes is smaller than the length of the scape, while in *P. crassidens* it is of the same length. The new species differs from *Phy-*

*sopleurus rafaelli* Santos-Silva, 2006, by the shape of the pronotum more distinctly crenulate and denticulate laterally, and by the head proportionally wider in *P. ubirajarai*.

*Etymology:* We dedicate this species to our recently deceased colleague, who was a teacher for us all, Professor Ubirajara Ribeiro Martins de Souza, for his enormous contribution to knowledge of the fauna of Cerambycidae from South America.

## RESUMO

*Uma nova espécie de Physopleurus Lacordaire da Guiana Francesa (Coleoptera, Cerambycidae, Prioninae). Erradamente identificada como Physopleurus crassidens (Bates, 1869) a partir do início do século 20 por alguns autores, esta espécie da Guiana Francesa é descrita aqui: Physopleurus ubirajarai sp. nov.*

**PALAVRAS-CHAVE:** Coleoptera; Cerambycidae; Prioninae; Macrotomini; *Physopleurus*; Taxonomia; América do Sul.

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