

A journal of world insect systematics

# INSECTA MUNDI

---

---

0887

A review of the history of the names *Hamaticherus* Dejean and *Plocaederus* Dejean and description of a new genus and species  
(Coleoptera: Cerambycidae: Cerambycinae)

Antonio Santos-Silva

Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil

Kimberly García

Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil

Juan Pablo Botero

Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil

Date of issue: October 11, 2021

Center for Systematic Entomology, Inc., Gainesville, FL

**Santos-Silva A, García K, Botero JP. 2021.** A review of the history of the names *Hamaticherus* Dejean and *Plocaederus* Dejean and description of a new genus and species (Coleoptera: Cerambycidae: Cerambycinae). *Insecta Mundi* 0887: 1–32.

Published on October 11, 2021 by  
**Center for Systematic Entomology, Inc.**  
P.O. Box 141874  
Gainesville, FL 32614-1874 USA  
<http://centerforsystematicentomology.org/>

**INSECTA MUNDI** is a journal primarily devoted to insect systematics, but articles can be published on any non-marine arthropod. Topics considered for publication include systematics, taxonomy, nomenclature, checklists, faunal works, and natural history. *Insecta Mundi* will not consider works in the applied sciences (i.e. medical entomology, pest control research, etc.), and no longer publishes book reviews or editorials. *Insecta Mundi* publishes original research or discoveries in an inexpensive and timely manner, distributing them free via open access on the internet on the date of publication.

*Insecta Mundi* is referenced or abstracted by several sources, including the Zoological Record and CAB Abstracts. *Insecta Mundi* is published irregularly throughout the year, with completed manuscripts assigned an individual number. Manuscripts must be peer reviewed prior to submission, after which they are reviewed by the editorial board to ensure quality. One author of each submitted manuscript must be a current member of the Center for Systematic Entomology.

Guidelines and requirements for the preparation of manuscripts are available on the *Insecta Mundi* website at <http://centerforsystematicentomology.org/insectamundi/>

**Chief Editor:** David Plotkin, [insectamundi@gmail.com](mailto:insectamundi@gmail.com)

**Assistant Editor:** Paul E. Skelley, [insectamundi@gmail.com](mailto:insectamundi@gmail.com)

**Layout Editor:** Robert G. Forsyth

**Editorial Board:** Davide Dal Pos, Oliver Keller, M. J. Paulsen

**Founding Editors:** Ross H. Arnett, Jr., J. H. Frank, Virendra Gupta, John B. Heppner, Lionel A. Stange, Michael C. Thomas, Robert E. Woodruff

**Review Editors:** Listed on the *Insecta Mundi* webpage

**Printed copies (ISSN 0749-6737) annually deposited in libraries**

Florida Department of Agriculture and Consumer Services, Gainesville, FL, USA

The Natural History Museum, London, UK

National Museum of Natural History, Smithsonian Institution, Washington, DC, USA

Zoological Institute of Russian Academy of Sciences, Saint-Petersburg, Russia

**Electronic copies (Online ISSN 1942-1354) in PDF format**

Archived digitally by Portico

Florida Virtual Campus: <http://purl.fcla.edu/fcla/insectamundi>

University of Nebraska-Lincoln, Digital Commons: <http://digitalcommons.unl.edu/insectamundi/>

Goethe-Universität, Frankfurt am Main: <http://nbn-resolving.de/urn/resolver.pl?urn:nbn:de:hebis:30:3-135240>

**Copyright held by the author(s).** This is an open access article distributed under the terms of the Creative Commons, Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited. <http://creativecommons.org/licenses/by-nc/3.0/>

# A review of the history of the names *Hamaticherus* Dejean and *Plocaederus* Dejean and description of a new genus and species (Coleoptera: Cerambycidae: Cerambycinae)

Antonio Santos-Silva

Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil  
toncriss@uol.com.br  
ORCID: <https://orcid.org/0000-0001-7128-1418>

Kimberly García

Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil  
kimberly.pg@gmail.com  
ORCID: <https://orcid.org/0000-0002-3631-180X>

Juan Pablo Botero

Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil  
jp\_bot@yahoo.com  
ORCID: <http://orcid.org/0000-0002-5547-7987>

**Abstract.** *Hamaticherus* Dejean, 1821 (Coleoptera: Cerambycidae: Cerambycinae) is considered a junior synonym of *Cerambyx* Linnaeus, 1758. *Hamaticherus* sensu Audinet-Serville, 1834 is considered a posterior usage of *Hamaticherus* Dejean, 1821, and an unavailable name. *Plocaederus* is considered as a new genus, and not a replacement name, proposed by Dejean (1835) to allocate the species included in *Hamaticherus* sensu Audinet-Serville, 1834. Therefore, a **new genus**, *Hamaederus* Santos-Silva, Garcia and Botero, is herein proposed to include the species currently allocated in *Plocaederus* Dejean, 1835, creating 15 **new combinations**, and additionally, a **new species** from French Guiana, *Hamaederus allofasciatus* Santos-Silva, Garcia and Botero, is described. Furthermore, *Plocaederus barauna* Martins and Monné, 2002 and *Plocaederus confusus* Martins and Monné, 2002 are proposed as **new junior synonyms** of *Hamaederus yucatecus* (Chemsak and Noguera, 1997), and *Hamaticherus bellator* Audinet-Serville, 1834 is transferred to *Plocaederus* Dejean, 1835, **new combination**. New geographical records are provided for *Hamaederus fraterculus* (Martins), *H. glaberrimus* (Martins), *H. rusticus* (Gounelle), and *H. yucatecus* (Chemsak and Noguera). *Hamaederus fasciatus* is formally excluded from the fauna of French Guiana. A key to American genera of Cerambycina (Cerambycini) is provided.

**Key words.** Cerambycini, Neotropical, new taxa, South America, taxonomy

**ZooBank registration.** urn:lsid:zoobank.org:pub:D0692D26-00DD-4B33-ABEE-A642DF3F0F38

## Introduction

Dejean (1821) proposed *Hamaticherus* listing available names for species from the old and new world. Audinet-Serville (1834) used the name *Hamaticherus* and, despite attributing the authorship to Dejean, he included only species from the new world. Dejean (1835) proposed the name *Plocaederus* as a “new name” for *Hamaticherus* sensu Audinet-Serville 1834, and Chevrolat (1845) designated *Cerambyx heros* Scopoli, 1765 (a species included by Dejean (1821) in *Hamaticherus*) as type-species of *Hamaticherus* Dejean, 1821. Thomson (1864) designated *H. bellator* as type-species of *Hamaticherus* sensu Audinet-Serville. Recently, Sama (1991) designated *H. bellator* Audinet-Serville, 1834 as type-species of *Plocaederus* Dejean, 1835.

Currently, *Cerambyx heros* is considered a junior synonym of *C. cerdo* Linnaeus, 1758, type-species of *Cerambyx* Linnaeus, 1758. Therefore, *Hamaticherus* Dejean, 1821 is also a junior synonym of *Cerambyx* and *Hamaticherus* sensu Audinet-Serville (1834) becomes a posterior usage for *Hamaticherus* Dejean, 1821.

Here, we update the taxonomic discussion involving *Plocaederus* and *Hamaticherus*, by making some considerations on former studies. Accordingly, after reviewing all the pertinent literature we determined that it is

necessary to describe a new genus, *Hamaederus*, to include those species that are currently placed in *Plocaederus*. Furthermore, herein we describe a new species of *Hamaederus* from French Guiana.

## Materials and Methods

Photographs were taken in the MZSP with a Canon EOS Rebel T3i DSLR camera, Canon MP-E 65mm f/2.8 1–5× macro lens, controlled by Zerene Stacker AutoMontage software. Measurements were taken in “mm” using a measuring ocular Hensoldt/Wetzlar - Mess 10 in the Leica MZ6 stereomicroscope, also used in the study of the specimens.

The terminology for head and prothorax follows mostly Fragoso (1993); the remaining terminology follows Švácha and Lawrence (2014).

The acronyms used in the text are as follows:

AACP	Alain Audureau Collection Privée, Saint Gilles Croix de Vie, France
ACMT	James E. Wappes, American Coleoptera Museum (currently deposited in the FSCA)
BMNH	The Natural History Museum, London, United Kingdom
CASC	California Academy of Sciences, San Francisco, California, USA
DHCO	Daniel Heffern Collection, Houston, Texas, USA
FSCA	Florida State Collection of Arthropods, Gainesville, Florida, USA
FWSC	Frederick W. Skillman collection, Phoenix, Arizona, USA
HSCV	Herbert Schmid Private Collection, Vienna, Austria
JLGC	Jean-Louis Giuglaris private collection, Matoury, French Guiana
MNHN	Muséum national d’Histoire naturelle, Paris, France
MNRJ	Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Rio de Janeiro, Brazil
MPUJ	Museo Javeriano de Historia Natural Lorenzo Uribe, S.J, Pontificia Universidad Javeriana, Bogotá, Colombia
MZSP	Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil
OMPC	Odetta Morvan Private Collection, Kaw, French Guiana
PHDC	Pierrri-Henri Dalens Collection, Rémire-Montjoly, French Guiana
RFMC	Roy F. Morris Collection, Lakeland, Florida, USA
SWLC	Steven W. Lingafelter Collection, Hereford, Arizona, USA

## Results

### On *Plocaederus* and *Hamaticherus* and their type species

According to Monné (2021): “*Hamaticherus* Audinet-Serville, 1834”; “Type-species – *Hamaticherus bellator* Audinet-Serville, 1834 (original designation, of Pascoe, 1863: 559. “*Hamaticherus bellator* must be confined to *H. bellator*”).” And “*Plocaederus* Dejean, 1835”; “Type-species – *Cerambyx* [sic] *plicatus* Olivier, 1790 (monotypy).” According to Tavakilian and Chevillotte (2021): “*Hamaticherus* Audinet-Serville, 1834”; Type species – *Hamaticherus bellator* Audinet-Serville, 1834 (designation by Pascoe, 1863: 559).” And “*Plocaederus* Dejean, 1835; Type species – *Cerambyx plicatus* Olivier, 1790 (monotypy).”

Sama (1991: 122) and Martins and Monné (2002: 157) provided extensive historic information regarding *Plocaederus* and *Hamaticherus*. It is necessary to clarify some information and comments made by them on both genera:

Considerations regarding Sama (1991):

1. “= *Hamaticherus* Serville, 1835 nec Dejean, 1821”: the fact that Audinet-Serville (1834) excluded some species from *Hamaticherus* Dejean, 1821, does not make *Hamaticherus* [A.-]Serville a different genus. Therefore, the correct genus is *Hamaticherus* sensu Audinet-Serville, 1834 and it must be considered only as a posterior usage for *Hamaticherus* Dejean 1821;

2. “Type species: *bellator* Dejean, 1837 [*sic*, 1836], nomen nudum (= *bellator* Serville, 1834) (present designation).” *Plocaederus bellator* is not a *nomen nudum* in Dejean, 1836, even 1835, because the species was already described in Audinet-Serville, 1834, and despite the fact that Dejean (1835 and 1836) attributed the authorship to himself.  
Considerations regarding Martins and Monné (2002):
  1. “In a later edition of his catalog, Dejean (1835: 322) repeated the concept of 1821 [for *Hamaticherus*]” In fact, Dejean did not repeat the concept of 1821, because *Hamaticherus* (written as *Hammaticherus*) included only non-American species, while those from America were included in *Plocaederus* Dejean, 1835, a new genus following the concept of Audinet-Serville (1834) for *Hamaticherus* Dejean, 1821. It is important to note that *Plocaederus* is not a new name for *Hamaticherus* sensu A. -Serville (1834), because only available names that are later determined to be homonyms can have replacement names, and this is not the case of the A.-Serville’s name, an unavailable name;
  2. “The South American species, inserted by A.-Serville in *Hamaticherus*, were included in *Plocaederus* Megerle in Dejean, whose synonym was “*Hammaticherus* Serville.” In fact, Dejean (1835) indicated *Plocaederus* as by his authorship;
  3. “Now, in *Plocaederus*, attributed to Megerle, it is valid in Dejean (1835: 319) because *P. plicatus* Olivier was inserted, the only species described; all others are *nomina nuda*.” This is not true since Dejean (1835) also included *Hamaticherus bellator* Audinet-Serville, 1834;
  4. “However, *Plocaederus* cannot be framed in this decision since it was mentioned by Dejean (1835) and attributed to Megerle.” The generic name *Plocaederus* was used several times after the publication of the catalogs by Megerle (1801–1805). Furthermore, the generic name *Hamaticherus* (or *Hammatichereus*) does not appear in Megerle (1801–1805);
  5. “[with the following synonyms: *Hamaticherus* Stephens, *Hamaticherus* Servile [*sic*] ... ]” The correct name is *Hamaticherus* sensu Stephens and *Hamaticherus* sensu Audinet-Serville. In fact, there are several citations along the text suggesting *Hamaticherus* was described many times. Actually, they are only different posterior usages for *Hamaticherus* Dejean, 1821;
  6. “(1) The genus *Plocaederus* Megerle is valid in Dejean (1835) since it was included a species already described, *Cerambyx plicatus* Olivier, 1790, which is therefore the type species.” In fact, two previously described species had been included;
  7. “(2) For *Plocaederus* Thomson, 1860, with non-American species, a new name must be provided because it is the junior homonym of *Plocaederus* Dejean, 1835.” In fact, Sama (1991) had already established the genus *Neoplocaederus*;
  8. “(5) As *Hamaticherus* A.-Serville is not a homonym of *Haematicherus* Germar, it must be revalidated. The type species is *H. bellator*, designation by Thomson (1864: 228) ...” In fact, *Hamaticherus* A.-Serville or *Haematicherus* Germar never existed: the correct name is *Hamaticherus* Dejean, 1821 sensu A.-Serville; *Haematicherus* Dejean, 1821 sensu Germar (it is not an emendation, it is an incorrect subsequent spelling: see ICZN 1999: 33.2 and 33.3). Furthermore, Germar (1823) did not write “*Haematicherus*”: he wrote “*Hametatcheri* Meg. Dej.” *Hamaticherus* sensu Audinet-Serville (1824) is at most a junior homonymy of *Hamaticherus* Dejean, 1821, which is currently a junior synonym of *Cerambyx* Linnaeus, 1758. But we think it must be considered a new concept for *Hamaticherus* Dejean, 1821. There is no evidence that the intention of Audinet-Serville (1834) was to describe a new genus. In other cases, some genera in Audinet-Serville (1834), attributed by him to Dejean, cannot be attributed to this latter author because there were no available species originally included. If each time a concept of a genus is changed, we consider that the description of a new genus has occurred, we would have a chaotic nomenclatural situation.

According to Monné (2021) regarding *Hamaticherus* Audinet-Serville, 1834: “**Type-species** - *Hamaticherus bellator* Audinet-Serville, 1834 (original designation, of Pascoe, 1863: 559, “*Hamaticherus* must be confined to *H. bellator*”).” According to Tavakilian and Chevillotte (2021): “Espèce-type: *Hamaticherus bellator* Audinet-Serville, 1834”; and “Désignation: designation de Pascoe, 1863:559.” Pascoe (1863) reported: “*Cerambyx*, Linn., is now restricted to those Longicorns of which *Cerambyx cerdo*, Linn., is the type. Many authors substitute for *Hamaticherus* (Meg., Dej.), but the *Hammaticherus*, Serv., must be confined to *H. bellator* and its allies, (*Plocaederus*,

Dej.)". It is clear that Pascoe (1863) was not designating the type species, especially because he affirmed that *Hammaticherus* Audinet-Serville "must be confined to *H. bellator* and its allies." Furthermore, it is evident that for him, *Hammaticherus* Audinet-Serville was equal to *Plocaederus*.

As cited before, Monné (2021) and Tavakilian and Chevillotte (2021) reported *Cerambyx plicatus* Olivier, 1790 as the type species of *Plocaederus* by monotypy. However, this is incorrect because *Hammaticherus bellator* Audinet-Serville, 1834 was already included in *Plocaederus* (also *Cerambyx batus* Linnaeus, 1758, in doubt). As seen before, the type species of *Hammaticherus* is *Cerambyx heros* Scopoli, 1763 (= *cerdo* Linnaeus, 1758) (Chevrolat 1845). Currently, *Hammaticherus* it is a junior synonym of *Cerambyx*, and the type species cannot be changed, as indicated by Martins and Monné (2002).

The designation by Thomson (1864) of *H. bellator* as type-species for *Hammaticherus* sensu Audinet-Serville is incorrect, because an unavailable genus cannot have a type-species. Therefore, the type species of *Plocaederus* is *Hammaticherus bellator* Audinet-Serville, 1834, as proposed by Sama (1991).

*Brasilianus* is an unnecessary substitute name and, as correctly pointed out by Martins and Monné (2002), the designation of *Cerambyx batus* as its type species is not valid. *Macrobrasilianus* Fragoso, 1971 has, as type species, *Hammaticherus bellator*. Accordingly, it is also a junior synonym of *Plocaederus*, since the type species of this latter is *H. bellator* (designation by Sama, 1991).

We were unable to find any work by Johann Karl Megerle von Mühlfeld in which he mentioned *Hammaticherus*. According to Dejean (1821) (translated): "The most difficult family is certainly that of the "Curculionites"; it is the least known to date. Mr. Germar and Megerle are very busy; I used their works, which are not yet published, but which they were kind enough to communicate to me ... There were many new genera in the "Lamellicornes" and "Capricornes" families; I have kept some of those established by Mr. Schoenherr [*sic*, Schönherr], Mac-Leay [*sic*, MacLeay], and Megerle, and I've also created a few that I think are essential; but this work needs to be reviewed, and is still only an essay." It is likely that Dejean (1821) also had used the unpublished works by Megerle, in which *Hammaticherus* and other generic names in Cerambycidae attributed by Dejean to this author were introduced.

The following references must be included for *Plocaederus* (*Hammaticherus* in Monné 2021 and Tavakilian and Chevillotte 2021) in the current catalogues:

### ***Plocaederus* Dejean, 1835**

*Plocaederus* Dejean 1835: 321 (*partim*); White 1853: 124 (*partim*); Sama 1991: 123; Bousquet and Bouchard 2013: 90 (*partim*).

*Hammaticherus* Dejean 1821: 105 (*partim*); Audinet-Serville 1834: 15; Chevrolat 1861: 247; Thomson 1861: 196 (*partim*); Strauch 1861: 128 (*partim*); Pascoe 1863: 559 (*partim*); Thomson 1864: 228; Aurivillius 1912: 50 (*partim*); Martins and Monné 2002: 155 (syn.); Monné 2005: 51 (cat.); Monné 2012: 11; Monné 2021: 65 (cat.).

*Cerambyx* (*Hammaticherus*); Laporte 1840: 428 (*partim*).

*Hammaticherus*; Lacordaire 1868: 255 (*partim*); Chenu 1860: 313; Bates 1870: 250 (*partim*).

*Hammatochaerus* Gemminger 1872: 2800 (cat., emend.; *partim*); Heyne and Taschenberg 1907: 238 (*partim*).

**Type species** – *Hammaticherus bellator* Audinet-Serville, 1834 (subsequent designation, Thomson, 1864: 228).

*Brasilianus* Jakobson, 1924: 238 (*partim*); Zajciw, 1966: 47 (key spp.; *partim*).

**Type-species** – *Cerambyx batus* Linnaeus, 1758 (original designation, invalid designation).

*Macrobrasilianus* Fragoso, 1971: 7 (*partim*); 1982: 149 (*partim*).

*Brasilianus* (*Macrobrasilianus*); Fragoso and Tavakilian, 1985: 239 (*partim*); Monné, 1993: 7 (*partim*).

**Type-species** – *Hammaticherus bellator* Audinet-Serville, 1834 (original designation).

The following references currently included in *Hammaticherus* (= *Plocaederus*) need to be transferred to that of *Juiaparus* Martins and Monné, 2002: LeConte (1873: 301); Bates (1879: 16); LeConte and Horn (1883: 286); and Leng (1884: 115).

### **Key to American genera of Cerambycina (Cerambycini)**

This key is translated and adapted from Martins and Monné (2002).

1. Procoxal cavities open behind ..... ***Plocaederus* Dejean, 1835**
- Procoxal cavities closed behind ..... **2**
- 2(1). Antennomere III with long and curved apical spine ..... **3**

- Antennomere III without apical spine or with spine perpendicular to antennal axis ..... 7
- 3(2). Apical spine of antennomere IV with apex directed backward; outer spine of elytral apex short .....  
..... *Peruanus Tippmann, 1960*
- Apical spine of the antennomere IV similar to that of antennomere III, directed forward .....  
..... 4
- 4(3). Antennae in males twice length of body ..... *Juiaparus Martins and Monné, 2002*
- Antennae in males reaching elytral apex ..... 5
- 5(4). Antennae in males reaching the middle of elytra; antennal tubercles not close to each other; scape rugose,  
at least on outer side of apical half; antennomere V slightly longer than IV; abdominal ventrites in  
males with abundant long setae ..... *Hirtobrasilianus Fragoso and Tavakilian, 1985*
- Antennae in males reaching or surpassing elytral apex; antennal tubercles close to each other; scape not  
rugose; antennomere V longer than IV; abdominal ventrites in males without long setae ..... 6
- 6(5). Antennae reaching elytral apex in males, and apical quarter of the elytra in females; antennomere IV half  
of length of III ..... *Atiaia Martins and Monné, 2002*
- Antennae surpassing the elytral apex in both sexes; antennomere IV longer than half length of III ....  
..... *Paratiaia Dalens and Giuglaris, 2012*
- 7(2). Head and mandibles in males tumid and widened; sides of clypeus tuberculate (in large males); antennae  
in males with sexual pubescence ..... *Bothrocerambyx Schwarzer, 1929*
- Mandibles in males without modifications; sides of clypeus without tubercle; antennal in males without  
sexual pubescence ..... 8
- 8(7). Antennomeres III and IV with long spine, perpendicular to antennal axis .....  
..... *Jupoata Martins and Monné, 2002*
- Antennomere III unarmed or with short spine; antennomere IV with distinct spine (curved backward or  
perpendicular to antennal axis) ..... 9
- 9(8). Antennomere IV about as long as  $\frac{1}{3}$  of length of III, with long apical spine, often arched upward .....  
..... *Potiaxixa Martins and Monné, 2002*
- Antennomere IV about as long as half of length of III, without apical spine or with spine short and per-  
pendicular to antennal axis ..... *Hamaederus Santos-Silva, Garcia and Botero, gen. nov.*

### **Hamaederus Santos-Silva, Garcia and Botero, new genus**

*Plocaederus* Dejean 1835: 322 (*partim*); White 1853: 124 (*partim*); Martins and Monné 2002: 224; Monné 2005: 56 (cat.);  
2012: 11; Bousquet and Bouchard 2013: 90 (*partim*); Monné 2021: 72 (cat.).

*Hamaticherus*; Dejean 1821: 105 (*partim*); Audinet-Serville 1834: 15 (*partim*); Bates 1870: 250 (*partim*); Girard 1873: 726  
(*partim*).

*Hammatochaerus* Gemminger 1872: 2800 (cat., emend.; *partim*); Gounelle 1909: 607 (*partim*).

*Brasilianus*; Martins 1979: 23 (*partim*).

**Etymology.** The name is a combination of the names *Hamaticherus* and *Plocaederus*; referring to the historical confusion that involved those names. Masculine gender.

**Type species.** *Plocaederus bipartitus* Buquet, 1860, here designated (name of the genus mistakenly registered as *Plocoederus* in the original description).

**Description** (translation of *Plocaederus* sensu Martins and Monné 2002). “Head slightly narrower than prothorax. Frons from subquadrangular to wider than long. Frontoclypeal suture arched, well-marked. Median groove distinct between antennal tubercles, posteriorly prolonged as carina; area between upper eye lobes elevated and ending posteriorly in a small triangular depression. Eyes large, well-projected, narrowed between the lobes behind antennae. Upper eye lobes developed, separated by a distance equivalent to 1–4 rows of ommatidia (distance slightly variable in the sexes). Lower eye lobes reaching the ventral surface of the head, closer to each other than the insertion of the maxillae. Antennal tubercles slightly projected, distant from each other. Antennae in males longer than in females, often reaching the elytral apex about middle of antennomere VIII. In females, the antennae are almost as long or slightly longer than the body. Scape subcylindrical or gradually widened toward

apex; length about  $\frac{1}{3}$  of the length of the antennomere III. Scape without apical cicatrix or with the cicatrix variable: from very distinct to slightly distinct. Scape coarsely punctate; outer side of apex with or without striae; in some species, with a small gibbosity on outer side of apical third. Antennomere III about  $\frac{1}{3}$  longer than scape, without carinae and rarely sulcate; apex nodose, without spine or with short spine transverse to the antennal axis. Antennomere IV shorter than III and V; apex nodose or with short spine, transverse to the antennal axis. Antennomere V with long spine, more or less perpendicular to the antennal axis; rarely this spine is just longer than in the next antennomeres; inner area to the spine often with sensorial setae and, sometimes, carinated in this region. Antennomeres VI–X with apical spine, gradually shorter toward X, carinate or not along middle. In males, antennomere XI slightly longer than X, often appendiculate; in females, as long as X. Prothorax wider than long, with variable basal and apical constriction. Sides of prothorax with a short central spine and a well-marked or slightly marked anterolateral tubercle. Pronotum transversely rugose in most species; centrobasal region without gibbosity or with well-marked gibbosity, pubescence of variable density, from practically glabrous to moderately pubescent. Sides of prothorax rugose, distinctly separated from the prosternum, which has no wrinkles. Prosternum transversely depressed centrally, with variable pubescence. Procoxal cavities closed behind, angulated laterally. Prosternal process truncate, with tubercle turned toward mesoventrite, sometimes, slightly projected or with vertical tubercle. Mesoventrite transversely depressed centrally; mesoventral process emarginated apically, without or with tubercle, when present, often vertical. Apex of metanepisternum with short and spiniform projection. Metaventricle slightly convex, with variable pubescence; metakatepisternal suture well-marked; metathoracic discrimen not reaching mesoventrite. Elytra with variable apex, spiniform, transversely truncate or rounded; pubescence variable, from entirely glabrous to distinctly pubescent; without dorsal carinae. Femora fusiform; apex of metafemora unarmed, with acute projections or with inner apex with long spine. Tibiae slightly widened toward apex; metatibiae without carina. Metatarsomere I shorter than or as long as II–III together. Abdominal ventrites with variable pubescence.”

**Remarks.** Currently, the type species indicated for *Plocaederus* sensu Martins and Monné (2002) is *Cerambyx plicatus* Olivier, 1790. However, the original description and figure by Olivier (1790) do not allow us to be sure about the identity of the species. The holotype originally belonged to Mr. Pâris collection (Olivier 1795), and Olivier (1790, 1795) did not know where it came from. Thus, we prefer to designate *Plocaederus bipartitus* as the type species.

### ***Hamaederus bipartitus* (Buquet, 1860), new combination**

(Fig. 1–14, 18–23)

*Plocaederus bipartitus* Buquet 1860: 624.

*Hammaticherus bipartitus*; Lacordaire 1868: 256.

*Hammatochaerus bipartitus*; Gemminger 1872: 2800 (cat.).

*Hamaticherus bipartitus*; Aurivillius 1912: 51 (cat.).

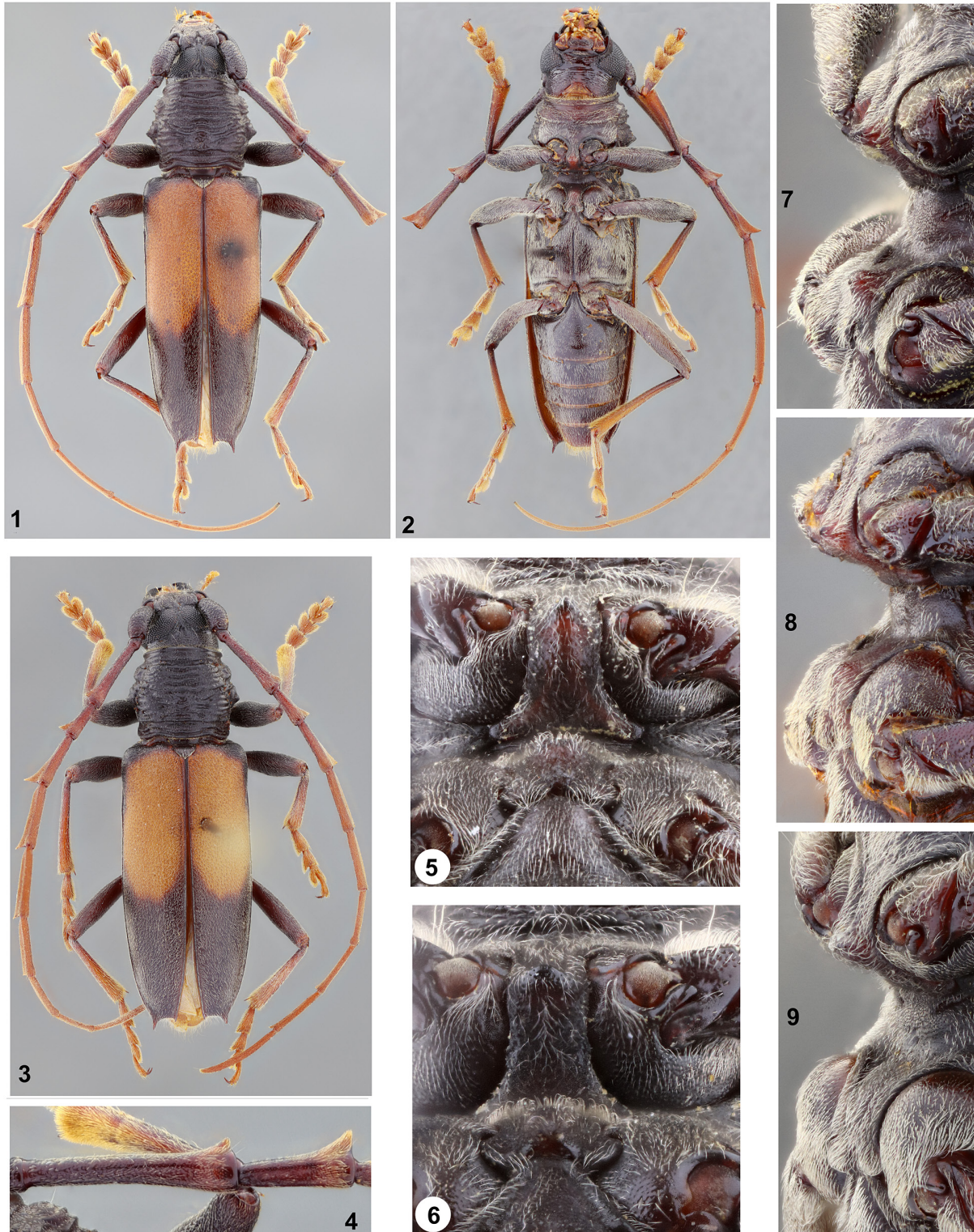
*Brasilianus bipartitus*; Blackwelder 1946: 560 (checklist; *partim*); Zajciw 1966: 51; Martins 1979: 24, 25; Fragoso 1982: 149; Monné 1993: 2 (cat.).

*Brasilianus (Brasilianus) bipartitus*; Monné and Giesbert 1994: 34 (checklist).

*Plocaederus bipartitus*; Martins and Monné 2002: 245 (*partim*); Monné 2005: 56 (cat.); Monné and Hovore 2006: 36 (checklist); Morvan and Morati 2006: 10 (distr.); Wappes et al. 2006: 7 (distr.); Martins et al. 2009: 504 (distr.); Touroult et al. 2010: 28; Morvan and Morati 2011: 15 (distr.); Galileo et al. 2011: 10, 76 (distr.; *partim*); Giuglaris 2012: 61 (distr.); Monné 2021: 73 (cat.).

**Remarks.** *Hamaederus bipartitus* was described from French Guiana. According to Monné (2021) and Tavakilian and Chevillotte (2021) the species was described based on a single specimen (holotype). Monné (2021) also indicated that the holotype is a male. However, Buquet (1860) did not indicate the sex, and the species was described based at least on two specimens. Besides the description of the specimen from his private collection, Buquet (1860) also reported (translated): “I have seen, in the collection of Mr. J. Thomson, an individual of this species in which the red spot invades at least two-thirds of the elytra. It comes from the same locality [Cayenne]. According to Martins and Monné (2002) (translated): “Described based on a single specimen ... from Cayenne, French Guiana, deposited in the MNHN. Buquet (1860: 625) examined a second specimen from Thomson’s collection (MNHN), also from Cayenne, which may be considered as a paratype.” In fact, the specimen is a syntype, and not a paratype.





**Figures 1–9.** *Hamaederus bipartitus* (Buquet, 1860). 1–2) Male from French Guiana, specimen 1. 1) Dorsal habitus. 2) Ventral habitus. 3) Male from French Guiana, specimen 2, dorsal habitus. 4) Male from French Guiana, specimen 1, antennomeres III–IV. 5–6) Prosternal and mesoventral processes, oblique ventral view, females from French Guiana. 5) Specimen 1. 6) Specimen 2. 7–9) Prosternal and mesoventral processes, lateral view, specimens from French Guiana. 7) Female, specimen 1. 8) Male. 9) Female, specimen 2.



**Figures 10–17.** *Hamaederus* spp. **10–14** *Hamaederus bipartitus* (Buquet, 1860), female from Ecuador. **10**) Dorsal habitus. **11**) Ventral habitus. **12**) Lateral habitus. **13**) Prostenal and mesoventral processes, lateral view. **14**) Prostenal and mesoventral processes, oblique ventral view. **15–17** *Hamaederus fragosoi* (Martins and Monné, 2002), male from French Guiana. **15**) Dorsal habitus. **16**) Scape, pedicel, and antennomeres III–V. **17**) Prostenal and mesoventral processes, lateral view. Figures 10–14 by Steven W. Lingafelter.

Although the mesoventral process was not described in the original description, it has been described as having a distinct central tubercle in other works (e.g. Martins 1979, Martins and Monné 2002). However, the tubercle (Fig. 5–9, 13–14, 21–22) may or may not be present and, when present, it is highly variable: from a slight tumescence to a distinctly elevated tubercle, which may be transversely wide or somewhat narrow and, in some cases, the apex is emarginate.

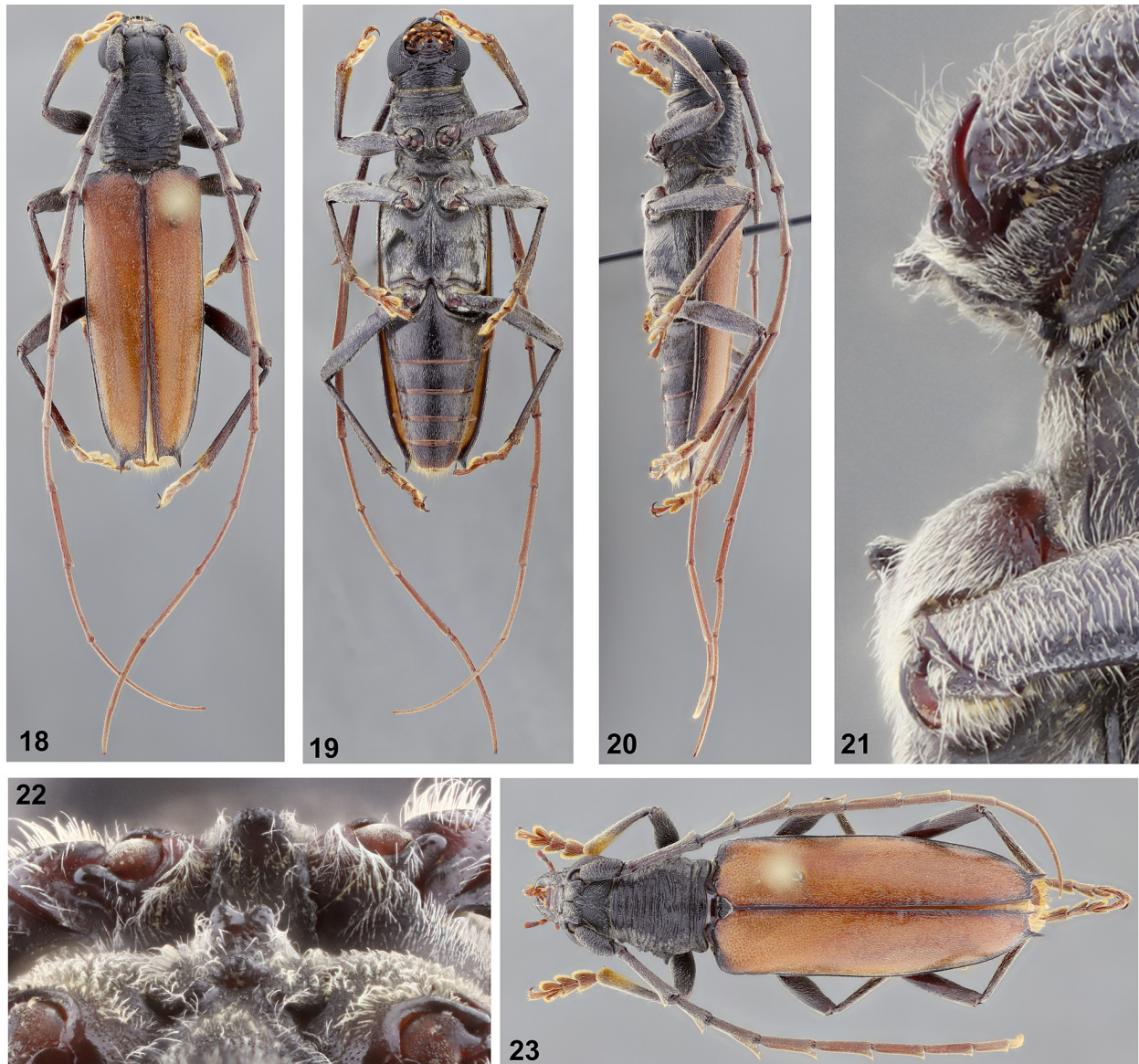
The specimens from Ecuador reported as being *H. bipartitus*, may or may not belong to this species. The general appearance is very similar but, apparently, the prothorax is somewhat slender, and the elytra are proportionally slightly longer (about 3.5 times prothoracic length), while in the specimens from French Guiana the prothorax is somewhat wider, and the elytra are slightly shorter (about 3.0 times the prothoracic length). Although we examined specimens from Ecuador only using photographs, especially those of a female sent by our friend Steven W. Lingafelter (Fig. 10–14), those differences apparently occur in both sexes. At least some specimens from the Brazilian Amazonian have the elytra as in the specimens from Ecuador, also slightly differing from those from French Guiana. Unfortunately, it was not possible to be sure what those small differences represent. For now, we are considering that *H. bipartitus* occurs in Brazil (Amazonas, Pará, Rondônia, Maranhão) and Ecuador, as listed in Monné (2021) and Tavakilian and Chevillotte (2021).

Martins and Monné (2002) reported on *H. bipartitus* (translated): “Variability. The color of the elytra varies a lot; in several specimens, the apical third is black, but this color may decrease until the elytra are reddish orange only with the friezes and small apical portion brownish.” We examined some specimens deposited in the MZSP collection, from the Brazilian Amazonian and Bolivia (Fig. 18–23), with the elytra black only on the margins, as reported by Martins and Monné (2002). Some of those specimens have the elytra proportionally longer than in the specimens from French Guiana. It is possible that they do not belong to *H. bipartitus* but, again, we could not find a reliable morphological characteristic, other than the elytral color. We did not see specimens with intermediate condition of the black posterior area of the elytra (between covering the apical quarter and only present on the apex) from Brazil and Bolivia. In addition to these variations, we also found variations (not related to geographic distribution) in the shape of the prosternal process, which may have the apex rounded (Fig. 22) or somewhat acute (Fig. 5); the length of the antennae in males (Fig. 1, 3, 18), which may be as long as in the specimen of the figure 18 (from French Guiana); the shape of the metatibiae, which may be slender or somewhat distinctly widened toward the apex; and the length of the black apical macula on the elytra with may starts from about middle to apical quarter.

For additional comments see remarks in *Hamaederus fragosoi*.

**Material examined.** SURINAME, *Marowijne*: Langaman Kondre, 1 female, VIII.1965, R. Malkin leg. (MZSP). FRENCH GUIANA: Route de Kaw – pk 35, 1 female, 4.VIII.1983, D. Dauthuille leg. (MZSP); pk 30, 1 female, 24.VII.1995, E. Giesbert and J. Wappes leg. (FSCA); pk 37, 1 female, 17–18.VIII.1995, J. Wappes leg. (FSCA); 1 male (MZSP), 1 female (RFMC), 27.IX–6.X.2013, Morris and Rasmussen leg.; 1 female, 11–23.VIII.2017, Wappes and Morris leg. (FSCA, formerly ACMT); pk 38, 1 male, 19.VIII.1995, Giesbert and Morris leg. (MZSP); pk 38 (Amazone Nat. Lodge; Montagne de Kaw, 4°33'N / 52°11'W), 1 female, 11–23.VIII.2017, Wappes and Morris leg. (MZSP, formerly ACMT); Route de l'Est km 90, 1 male, 8.XI.1980, G.L. Tavakilian leg. (MZSP). BRAZIL, *Amazonas*: AM 010, km 26, Reserva Ducke, 27.IX.1978, no collector indicated (MZSP). ECUADOR, *Orellana*: Yasuní N.P., Yasuní Res. Stn., 0°40.4'S / 76°23.9'W, Malaise trap M7-2, canopy, 27 m, 1 female, 18–24.VII.2008, A.K. Tishechkin leg. (SWLC).

**Specimens that may or may not be *H. bipartitus*.** BRAZIL, *Rondônia*: 62 km SW Ariquemes, Fazenda Rancho Grande, 2 males, 11.X.1993, C.W. and L.B. O'Brien leg. (MZSP); Porto Velho, Parque Ecológico, 1 male, 06.IX.2008, no collector indicated (MZSP). *Pará*: Vianópolis, Fazenda São Lucas, 1 female, no date indicated, Jauffret leg. (MZSP); Serra Norte, Est. Manganês, 1 male, 10.VI.1986, W. França leg. (MZSP); Óbidos, 1 male, IX.1959, formerly Dirings collection (MZSP); km 93 da BR-14, 1 female, VIII-IX.1959, Expedição Departamento de Zoologia leg. (MZSP). BOLIVIA, Santa Cruz: 4–6 km SSE Buena Vista, FandF Hotel, 1 male, 23–26.X.2000, Wappes and Morris leg. (FSCA, formerly ACMT); FandF Hotel, 1 male, 7–10.X.2004, Morris and Wappes leg. (RFMC); Dpt. Potrerillos del Guendá, 350–400 m, 17°40'S, 63°27'W, 1 female, 7-9.IX.2012, Wappes, Skelley, Bonaso leg. (MZSP, formerly ACMT); Buena Vista, vic. Flora and Fauna Hotel, 1 male, 1 female, 17–20.X.2000, R. Morris leg. (RFMC).



**Figures 18–23.** *Hamaederus bipartitus* (Buquet, 1860), specimens from Bolivia (Santa Cruz). **18–22** Male. **18**) Dorsal habitus. **19**) Ventral habitus. **20**) Lateral habitus. **21**) Prosternal and mesoventral processes, lateral view. **22**) Prosternal and mesoventral processes. **23**) Female, dorsal habitus.

### ***Hamaederus fasciatus* (Martins and Monné, 1975), new combination**

(Fig. 24–33)

*Brasilianus fasciatus* Martins and Monné 1975: 275; Martins 1979: 25 (key); Fragoso 1982: 149; Monné 1993: 2 (cat.).

*Brasilianus (Brasilianus) fasciatus*; Monné and Giesbert 1994: 34 (checklist; *partim*).

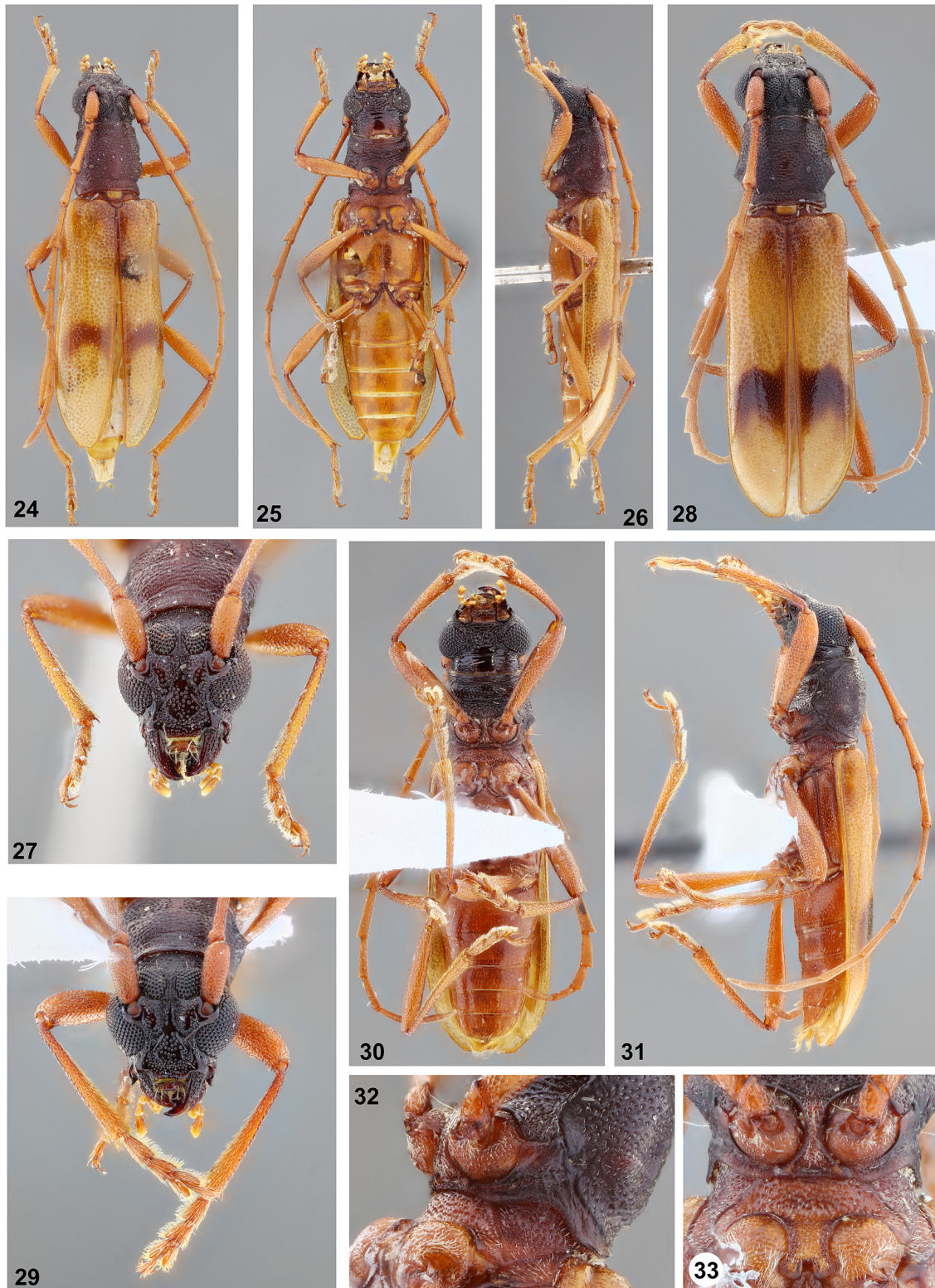
*Plocaederus fasciatus*; Martins and Monné 2002: 231 (*partim*); Monné 2005: 56 (cat.; *partim*); Wappes et al. 2006: 7 (distr.); Monné and Hovore 2006: 36 (checklist; *partim*); Galileo et al. 2011: 10, 78; Monné et al. 2017: 7 (holotype); Lingafelter et al. 2017: 23; Monné 2021: 73 (cat.; *partim*).

**Redescription. Female** (Fig. 24–27). Head capsule dark brown, sometimes almost black; ventral mouthparts reddish-brown or orangish-brown, except for mentum mostly brownish, and palpi lighter with apex of palpomeres pale yellow; anteclypeus mostly pale yellow or reddish-brown; labrum brown; antennae orangish-brown. Prothorax from brown to almost black, except reddish-brown central area of prosternal process. Ventral surface of

mesothorax reddish-brown, except mesoventral process with dark brown margins and orangish-brown central area. Ventral surface of metathorax from orangish-brown to reddish-brown, except dark brown margins of meta-ventral process. Scutellum from reddish-brown to brown. Elytra reddish-brown or brownish on circum-scutellar area, orangish-brown on remaining area between anterior margin and transverse dark brown macula placed just after middle (dark brown macula from distinctly to slight arched), pale yellow or light orangish-brown from dark brown macula to apex. Legs orangish-brown. Abdominal ventrites from orangish-brown to reddish-brown, often with apex of ventrites I–IV pale yellow.

**Head.** Frons coarsely and abundantly punctate, punctures sparser on sides of frontal plate and absent centrally between eyes (close to frontal plate); with minute, sparse white setae, and one long, erect seta on each side close to clypeus. Area between antennal tubercles coarsely, abundantly punctate; with minute, sparse white setae. Area between upper eye lobes carinate centrally; with a few minute white setae close to eyes. Central area of vertex close to prothorax smooth and glabrous. Area behind upper eye lobes coarsely, densely punctate; with minute, sparse whitish setae. Area behind lower eye lobes almost smooth close to eye, plicate-punctate on wide area close to prothorax; surface almost glabrous. Genae coarsely, somewhat rugose-punctate except smooth apex; with minute, sparse white pubescence except glabrous smooth area. Antennal tubercles coarsely punctate on base, gradually finer toward smooth apex; with minute, sparse white setae on punctate area. Wide central area of postclypeus coarsely, densely punctate, and sides smooth; punctures with minute white setae. Labrum with minute, sparse yellowish-brown or yellowish-white setae close to anteclypeus, and long, erect setae of same color directed forward on sides of this area; anterior area with moderately long yellowish-brown or yellowish-white setae directed forward centrally, shorter laterally. Gulamentum mostly smooth, glabrous posteriorly, coarsely plicate-punctate and with sparse, yellowish-white or slightly brownish, both short and somewhat long setae. Distance between upper eye lobes 0.06 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.43 times distance between outer margins of eyes. Antennae 1.6 times elytral length, reaching elytral apex at base of antennomere XI. Scape coarsely, abundantly punctate basally, punctures gradually sparser toward apex except smooth dorsal apex; with yellowish-white pubescence not obscuring integument except glabrous dorsal apex; with narrow cicatrix near apex. Antennomeres with yellowish-white pubescence, pubescence denser from V; antennomeres III–IV cylindrical, with nodose apex; antennomeres V–X serrated; antennomere XI abruptly narrowed near apex. Antennal formula based on length of antennomere III: scape = 0.73; pedicel = 0.12; IV = 0.75; V = 0.90; VI = 0.81; VII = 0.77; VIII = 0.69; IX = 0.69; X = 0.61; XI = 0.85.

**Thorax.** Prothorax slightly wider than long (including lateral tubercles); lateral tubercles placed slightly after middle. Pronotum coarsely, densely punctate on basal half, except nearly smooth narrow area close to anterior margin, slightly plicate-punctate from middle to posterior constriction, except central area subsmooth or only slightly transversely plicate, abundantly punctate near apex (punctures slightly finer); with minute white seta in most of punctures. Sides of prothorax coarsely, somewhat abundantly punctate except anterior area densely micropunctate, with a few coarse punctures interspersed, and posterior border and proepimeron densely microsculptured, with oblique band toward procoxal cavity with coarse punctures interspersed; nearly all coarse punctures with minute white seta. Prosternum coarsely rugose-punctate on wide central area, coarsely punctate on sides of central area, densely, somewhat coarsely punctate close to procoxal cavities and prosternal process, opaque, finely rugose-punctate inside anterior sulcus, rugose close to anterior margin; with short, sparse white setae from anterior sulcus to posterior area, setae gradually denser toward posterior area. Prosternal process distinctly inclined apically (Fig. 32 – equal to that in male); without tubercle; narrowest area 0.2 times procoxal width. Mesoventrite coarsely, abundantly, shallowly punctate (punctures sparser laterally); with short, sparse white setae. Mesanepisternum coarsely, abundantly punctate (punctures almost absent on mesanepisternum close to mesepimeron), with somewhat abundant white setae (almost absent close to mesepimeron); mesepimeron finely, abundantly punctate; with white pubescence; mesoventral process without tubercle, with apical sides tab-shaped, and posterior margin strongly emarginate centrally; narrowest area 0.5 times mesocoxal width. Metanepisternum coarsely, somewhat abundantly punctate; with white pubescence, slightly denser anteriorly and posteriorly. Metaventrite moderately coarsely, shallowly, abundantly punctate; most punctures with short yellowish-white seta. Scutellum with a few decumbent yellowish-white setae. **Elytra.** Coarsely, abundantly punctate; most of punctures with minute yellowish-white seta; apex truncate. **Legs.** Femora coarsely, densely, shallowly punctate; with sparse white pubescence, slightly denser toward apex. Tibiae with somewhat sparse whitish setae, except



**Figures 24–33.** *Hamaederus fasciatus* (Martins and Monné, 1975). 24–27) Holotype female. 24) Dorsal habitus. 25) Ventral habitus. 26) Lateral habitus. 27) Head, frontal view. 28–31) Male. 28) Dorsal habitus. 29) Head, frontal view. 30) Ventral habitus. 31) Lateral habitus. 32) Prosteral process, oblique view. 33) Prosteral and mesoventral processes.

dense, bristly light yellowish-brown pubescence on posterior area of ventral surface. Metatarsomere I shorter than II–III together.

**Abdomen.** Ventrites finely, somewhat sparsely punctate; with sparse whitish pubescence, slightly denser laterally; apex of ventrite V subrounded.

**Male** (Fig. 28–33). It differs from female by the antennae slightly longer (1.8 times elytral length, reaching elytral apex at posterior third of antennomere IX).

**Dimensions (mm) (male/female).** Total length, 7.45/8.45–9.75; prothoracic length, 1.35/1.55–1.70; anterior prothoracic width, 1.25/1.35–1.50; posterior prothoracic width, 1.30/1.45–1.65; maximum prothoracic width, 1.60/1.75–2.00; humeral width, 1.90/2.10–2.40; elytral length, 4.80/5.30–6.00. Dimensions of the holotype (original description): Total length, 7.93; prothoracic length, 1.52; maximum prothoracic width, 1.73; humeral width, 2.06; elytral length, 5.54.

**Material examined.** BOLIVIA, *Santa Cruz*: Potrerillos del Guendá, 17°40'S / 63°27'W, 350–400 m, 1 male (MZSP, formerly ACMT), 2 females (FSCA, formerly ACMT), 7-9.IX.2012, J. Wappes, P. Skelley and T. Bonaso leg.; (800 m), holotype female, 1.X.1960, Zischka leg. (MZSP).

**Remarks.** Martins and Monné (1975) described *Brasilianus fasciatus* based on a single female from Bolivia (Santa Cruz). Later, Monné and Giesbert (1994) reported the species from French Guiana, apparently, based on specimens from the private collection of the second author (currently, deposited at FSCA). According to Martins and Monné (2002) (translated): “Variability. We examined a male from French Guiana [probably the female currently present in the MZSP collection] that differs considerably from the holotype. In this specimen, the head, pronotum, and scape are dark brown, almost black; the posterior half of the pronotum has some very shallow wrinkles; the elytra are unicolorous, reddish-orange and the apices of the elytra are obliquely truncate.” Based on specimens from French Guiana examined by us, we have no doubt that those specimens belong to *Hamaederus allofasciatus*, new species. Accordingly, we are formally excluding *H. fasciatus* from the fauna of French Guiana. Monné and Hovore (2006) reported *H. fasciatus* from Ecuador, without a doubt, based on specimens belonging to the private collection of the second author, who extensively collected in Ecuador (currently, deposited at CASC). It is possible that the species occurs in this country, but only the examination of the specimens collected by Frank T. Hovore would confirm the identification.

### ***Hamaederus fragosoi* (Martins and Monné, 2002), new combination**

(Fig. 15–17)

*Plocaederus fragosoi* Martins and Monné 2002: 238; Monné 2005: 56 (cat.); Wappes et al. 2006: 7 (distr.); Martins et al. 2008: 281 (distr.); Touroult et al. 2010: 28; Morvan and Morati 2011: 15 (distr.); Galileo et al. 2011: 10, 78 (distr.); Nascimento and Bravo 2014: 131 (distr.); Monné and Monné 2016: 7 (holotype); Monné 2021: 73 (cat.).

**Remarks.** *Hamaederus fragosoi* was described based on a single female from Brazil (Amapá). The holotype was destroyed during the fire in 2018 at the MNRJ. Martins et al. (2008) reported the species from French Guiana, and Martins et al. (2014) from the Brazilian state of Ceará.

According to Martins and Monné (2002) (translated): “The absence of tubercle in the mesoventral process separates *P. fragosoi* from *P. bipartitus*, *P. glabricollis*, *P. rugosus*, and *P. rusticus*, species whose mesoventral process is provided with a tubercle. It is more similar to *P. glaberrimus* and differs in its general color, in the apical spines of non-divergent elytra, and in the upper ocular lobes as far apart as a row of ommatidia. In *P. glaberrimus*, the elytral spines are markedly divergent and the upper ocular lobes are separated by a distance equal to two rows of ommatidia.” In fact, *H. fragosoi* is much more similar to *H. bipartitus*. With the finding that the tubercle of the mesoventral process may be absent in *H. bipartitus*, as in *H. fragosoi* (Fig. 17), the only reliable difference between these two species is the shape of the apex of antennomeres III and IV: nodose or subnodose in *H. fragosoi* (Fig. 16), distinctly projected in *H. bipartitus* (Fig. 4). This feature does not vary in other species (including those of which we examined a large number of specimens).

**Material examined.** FRENCH GUIANA: Amazone Nature Lodge, Kaw Rd. 6, 4.550330, –52.170310, 1 male, 11–23.VIII.2017, Morris and Wappes leg. (RFMC); Saint Laurent du Maroni, Crique Serpent, 1 female, 10.XI.2006, O. Morvan leg. (MZSP).

***Hamaederus fraterculus* (Martins, 1979), new combination**

(Fig. 34–42)

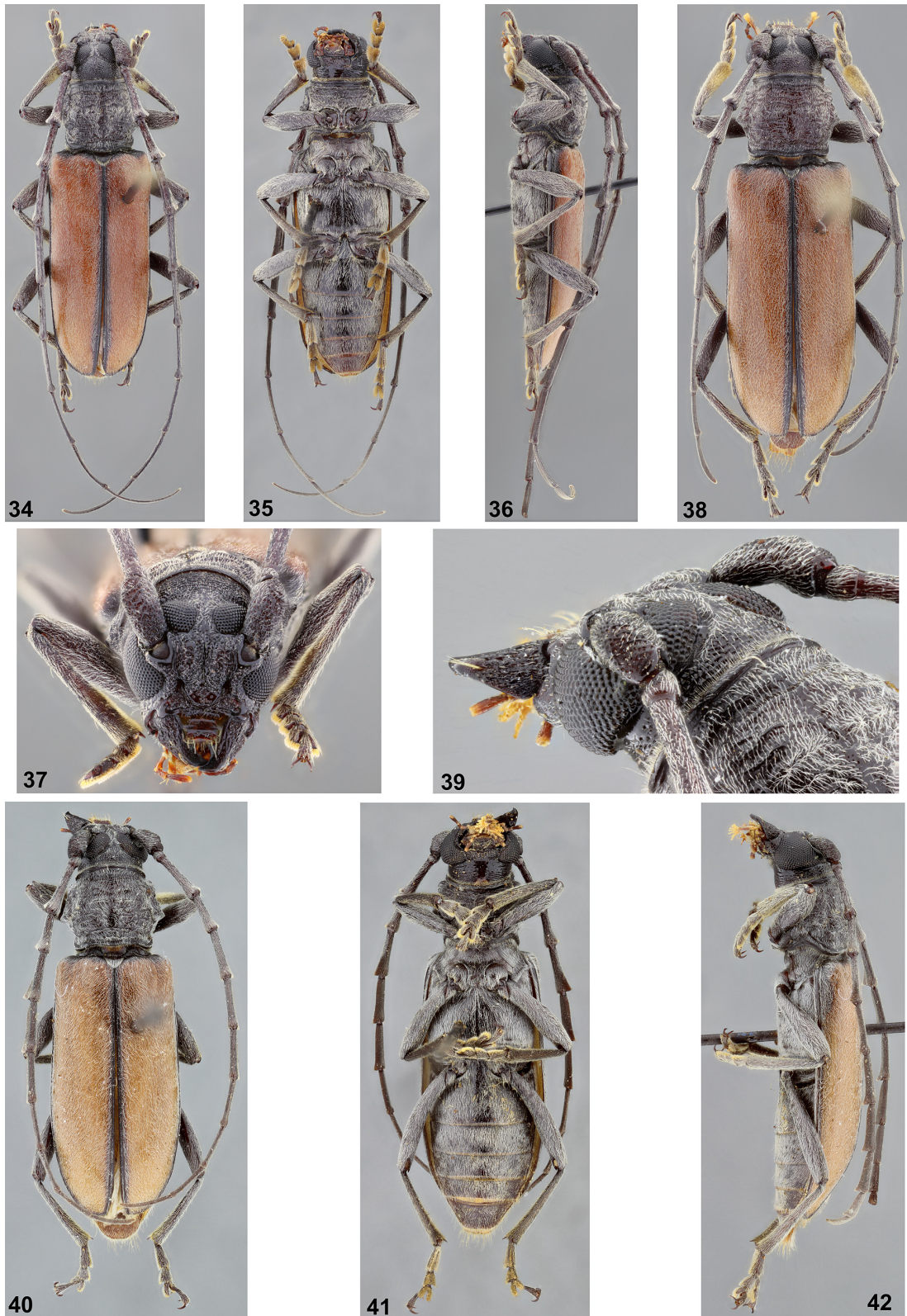
*Brasilianus fraterculus* Martins 1979: 26; Fragoso 1982: 149; Monné 1993: 2 (cat.).*Brasilianus* (*Brasilianus*) *fraterculus*; Monné and Giesbert 1994: 34 (checklist).*Plocaederus fraterculus*; Martins and Monné 2002: 233; Monné 2005: 57 (cat.); Monné and Hovore 2006: 36 (checklist); Galileo et al. 2011: 10, 80 (distr.); Monné 2021: 74 (cat.).

**Redescription. Male** (Fig. 34–37). Integument mostly black. Ventral mouthparts mostly dark brown posteriorly, mostly reddish-brown anteriorly (maxillary palpomere IV and labial palpomere III brown with apex reddish-brown); part of anteclypeus and anterior area of labrum brownish. Elytra rufous except for black margins.

**Head.** Frons coarsely, abundantly punctate, punctures slightly sparser on frontal plate; with sparse, white pubescence, almost absent on sides of frontal plate. Area between antennal tubercles and upper eye lobes coarsely, abundantly, confluent punctate laterally, almost smooth centrally; with abundant white pubescence laterally, almost absent centrally. Remaining surface of vertex with abundant, transverse, small rugosities (more punctate-plicate centrally toward eyes); with sparse white pubescence toward eyes, almost glabrous toward prothorax. Area behind upper eye lobes somewhat finely, abundantly, confluent punctate close to eye, with abundant, transverse, small rugosities toward prothorax; with minute, sparse white pubescence, sparser toward prothorax. Area behind lower eye lobes coarsely rugose-punctate toward upper eye lobe, except narrow smooth area close to eye (sometimes entire area close to eye smooth), longitudinally plicate toward ventral surface; with short, decumbent, very sparse yellowish-white setae. Genae somewhat finely and rugose, except smooth apex; with minute, sparse white pubescence on punctate area. Antennal tubercles coarsely, somewhat abundant punctate, except smooth apex; with white pubescence not obscuring integument, except glabrous smooth area. Wide central area of postclypeus coarsely, abundantly punctate, and sides smooth; with sparse white pubescence on wide central area, glabrous laterally. Labrum coplanar with anteclypeus posteriorly, inclined anteriorly; smooth and glabrous close to anteclypeus, finely punctate close to the inclined area (punctures anastomosed, forming elliptical depression on each side); coplanar area with minute, sparse white setae centrally, and long yellowish setae directed forward laterally; inclined area with somewhat long and abundant yellowish setae. Gulamentum almost smooth, glabrous posteriorly, depressed, finely, sparsely punctate, with short, erect, sparse yellowish-white setae between eyes. Distance between upper eye lobes (only one male measured) 0.12 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.50 times distance between outer margins of eyes. Antennae 2.5 times elytral length, reaching elytral apex at basal quarter of antennomere VIII. Scape without apical cicatrix; scape, pedicel, and antennomeres with abundant white pubescence not obscuring integument, except glabrous, narrow dorsal apex of III and IV; antennomeres III–X with apex tumid and triangularly projected on outer apex; antennomeres V–X somewhat flattened dorso-ventrally; antennomere XI arched, with posteriorly area not abruptly narrowed. Antennal formula based on length of antennomere III: scape = 0.71; pedicel = 0.16; IV = 0.80; V = 1.09; VI = 1.18; VII = 1.21; VIII = 1.21; IX = 1.21; X = 1.11; XI = 1.52.

**Thorax.** Prothorax wider than long; lateral tubercles large, conical, placed centrally. Pronotum transversely, irregularly plicate on wide central area, except on central gibbosity placed from anterior third to posterior fifth (anterior area of this gibbosity carina-shaped); finely, abundantly punctate among folds and on central gibbosity; finely, abundantly punctate on anterior and posterior fifth; with abundant white pubescence not obscuring integument (more yellowish-white depending on light intensity), almost absent on central gibbosity, shorter and sparser close to anterior margin, absent inside posterior sulcus. Sides of prothorax transversely, irregularly plicate, and finely, abundantly punctate on wide central area; smooth inside anterior and posterior sulci; posterior border and proepimeron somewhat finely rugose; with abundant white pubescence not obscuring integument, nearly absent anteriorly (this area widened toward prosternum), and sparse on posterior border and proepimeron. Prosternum somewhat rugose-punctate about posterior half, with transverse sulcus about middle, irregularly plicate-punctate from central sulcus to anterior sulcus, finely punctate close to anterior margin; with abundant white pubescence from anterior sulcus to procoxal cavities (pubescence denser toward posterior area), glabrous inside anterior sulcus, and with short yellowish-white pubescence on sides of area close to anterior margin. Prosternal process strongly inclined posteriorly, with rounded protuberance in the just after inclined region (sometimes slightly conspicuous); narrowest area 0.3 times procoxal width. Ventral surface of meso- and metathorax with abundant white pubescence, partially obscuring integument laterally (pubescence shorter and sparser on antero-central





Figures 34–42. *Hamaederus fraterculus* (Martins, 1979). 34–37) Male. 34) Dorsal habitus. 35) Ventral habitus. 36) Lateral habitus. 37) Head, frontal view. 38) Female, dorsal habitus. 39–42) Holotype female. 39) Head, oblique view. 40) Dorsal habitus. 41) Ventral habitus. 42) Lateral habitus.

area of mesoventrite). Mesoventral process with tab-shaped process on sides of apex, strongly, widely emarginate centrally on posterior margin; narrowest area 0.7 times mesocoxal width; central area widely, longitudinal depressed, without tubercle. Scutellum with yellowish pubescence on margins, nearly glabrous on remaining surface (sometimes, pubescence white, covering most of surface). **Elytra.** Finely, densely punctate; apex from rounded to truncate, often with sutural angle slightly projected; with abundant white pubescence not obscuring integument. **Legs.** Femora with abundant white pubescence not obscuring integument; apices not spiniform. Tibiae with abundant white pubescence not obscuring integument, except dense, bristly light yellowish-brown pubescence on posterior area of ventral surface. Metatarsomere I shorter than II–III together.

**Abdomen.** Ventrites finely, abundantly punctate, except smooth apex of I–IV; with abundant white pubescence not obscuring integument; apex of ventrite V truncate, slightly emarginate centrally.

**Female** (Fig. 38–42). Similar to male, differing especially by the antennae distinctly shorter (1.75 times elytral length, reaching elytral apex at basal third of antennomere X; only one female measured).

**Dimensions (mm) (male (3)/ female (4)).** Total length, 15.55–16.60/14.65–16.70; prothoracic length, 3.05–3.35/2.65–3.10; anterior prothoracic width, 2.65–2.80/2.30–2.65; posterior prothoracic width, 2.95–3.15/2.65–3.05; maximum prothoracic width, 3.65–4.10/3.35–3.80; humeral width, 4.35–4.70/4.10–4.50; elytral length, 9.70–10.65/9.25–10.25. Dimensions of the holotype (original description): Total length, 12.90; prothoracic length, 2.70; maximum prothoracic width, 3.50; humeral width, 3.80; elytral length, 8.90.

**Material examined.** BOLIVIA (**new country record**), *Santa Cruz*: El Refugio Los Volcanes, 3363', 1 male, 1–10.X.2008, Morris and Wappes leg. (RFMC); 1 male, 2 females, 18–24.X.2014, Morris and Wappes leg. (RFMC); 4 km N Bermejo, Refugio Los Volcanes, 1045–1350 m, 18°06'S / 63°36'W, 1 male (MZSP, formerly ACMT), 1 female (FSCA, formerly ACMT), 17–24.X.2014, Wappes and Morris leg.; 20 km N Camiri, Road to Eyti, 1250 m, 6–8 km E Hwy 9, 19°52'S / 63°29'W, 1 female, 5–10.XII.2012, Wappes, Bonaso and Skillman leg. (MZSP, formerly ACMT).

**Remarks.** *Hamaederus fraterculus* was described based on a single female from Paraguay (Boquerón). Formally, this is the only known specimen of this species, although Bezark (2021) illustrated a female from the collection of the late Ole Mehl from Paraguay (Canindeyú), which may or may not belong to *H. fraterculus*. Martins (1979) described the elytral apex as rounded. However, the elytral apex is from truncate to rounded in this species. The male is unknown.

*Hamaederus fraterculus* belong to the group of species without a cicatrix on the apex of the scape.

### ***Hamaederus glaberrimus* (Martins, 1979), new combination**

(Fig. 43–58)

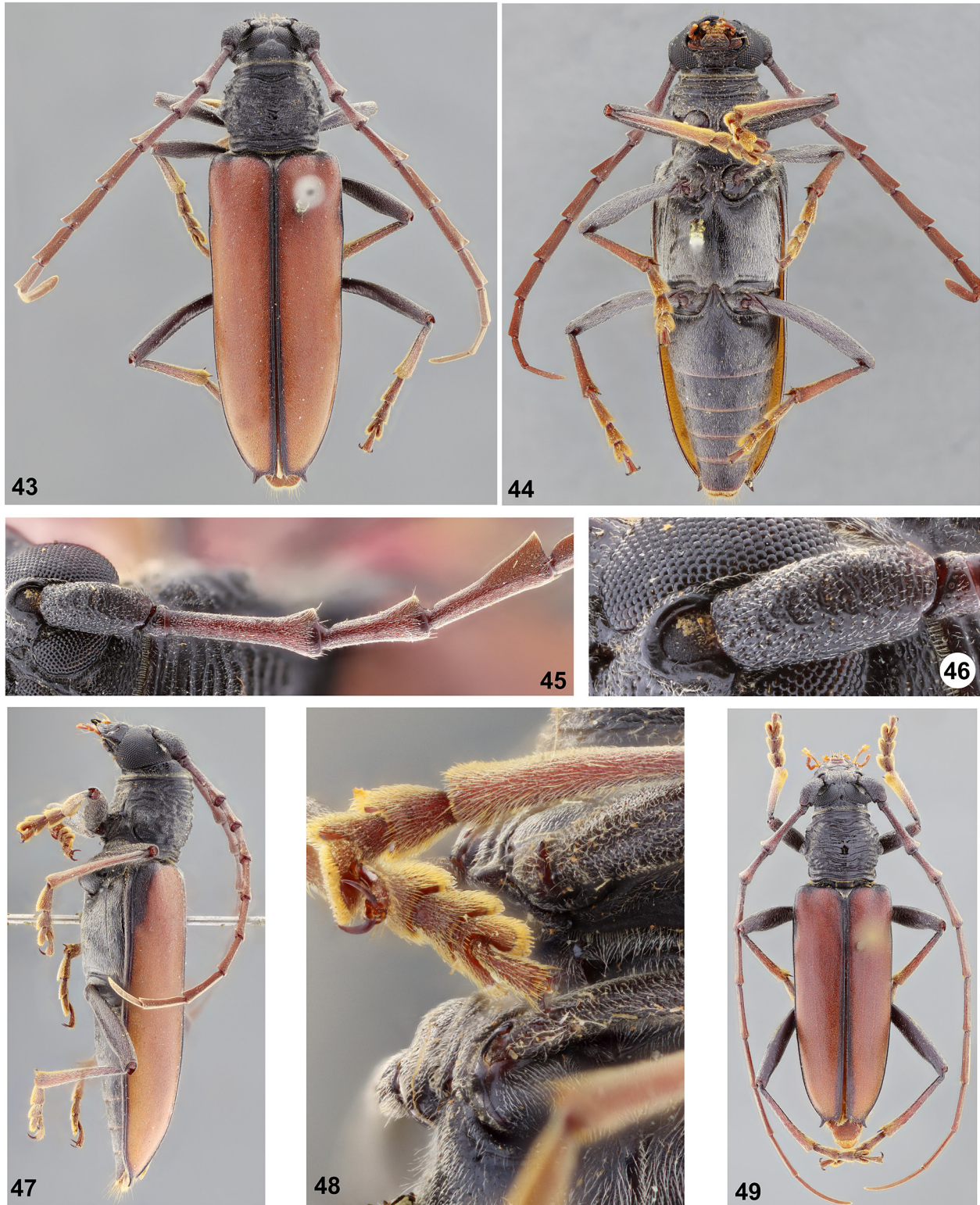
*Brasilianus glaberrimus* Martins 1979: 26; Fragoso 1982: 149; Monné 1993: 3 (cat.).

*Brasilianus (Brasilianus) glaberrimus*; Monné and Giesbert 1994: 34 (checklist).

*Plocaederus glaberrimus*; Martins and Monné 2002: 238; Monné 2005: 57 (cat.); Monné and Hovore 2006: 36 (checklist); Monné et al. 2010: 238 (distr.); Galileo et al. 2011: 10, 81 (distr.); Monné et al. 2017: 7 (holotype); Monné 2021: 74 (cat.).

**Redescription. Male** (Fig. 49–56). Integument mostly black; ventral mouthparts mostly dark brown posteriorly, irregularly reddish-brown and yellowish-brown anteriorly; antennomere III dark brown basally, gradually brown toward the apex; antennomeres IV–XI brown. Elytra mostly brown, except for narrow black area on base of dorsal surface, widened close to humerus, black macula on inclined basal quarter, narrow black band along suture, epipleural margin, and apex. Apical area of protibiae and tarsi brown. Yellowish-white pubescence appearing to be white depending on light intensity.

**Head.** Frons finely, somewhat abundantly punctate; frontal plate with punctures slightly coarser and sparser than on remaining surface of frons; with yellowish-white pubescence not obscuring integument, sparser on frontal plate, especially anteriorly. Area between antennal tubercles and upper eye lobes carinate centrally, especially toward upper eye lobes; area between antennal tubercles with yellowish-white pubescence not obscuring integument, except for glabrous central carina. Remaining surface of vertex with small, elongated, smooth, glabrous depression following the central carina between upper eye lobes, somewhat finely, densely scabrous-punctate, with sparse yellowish-white pubescence on remaining surface. Area behind upper eye lobes slightly depressed, with shallow, confluent punctures close to eye, somewhat finely, densely and scabrous-punctate on remaining



**Figures 43–49.** *Hamaederus glaberrimus* (Martins, 1979). 43–48) Holotype female. 43) Dorsal habitus. 44) Ventral habitus. 45) Scape, pedicel, and antennomeres III–V. 46) Scape. 47) Lateral habitus. 48) Prosternal and mesoventral processes. 49) Male, dorsal habitus.

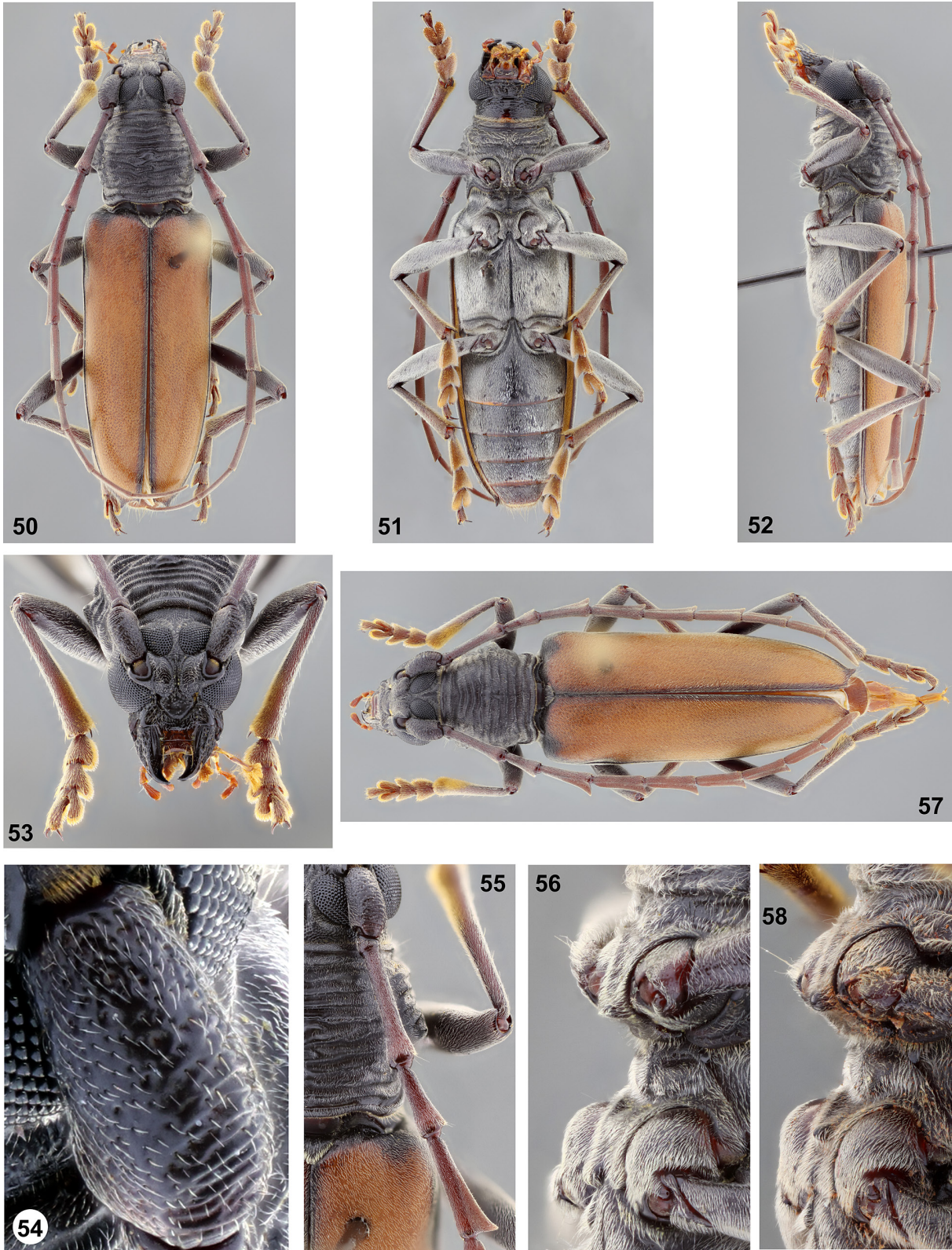
surface; with sparse yellowish-white pubescence close to eye, almost glabrous on remaining surface. Area behind lower eye lobes smooth, glabrous close to eye, transversely plicate-punctate, glabrous on remaining surface. Genae finely, sparsely punctate except smooth apex; with sparse yellowish-white pubescence on punctate area (slightly more abundant toward ventral surface), glabrous on smooth area. Antennal tubercles finely, abundantly punctate, with yellowish-white pubescence not obscuring integument basally, smooth and glabrous apically. Wide central area of postclypeus somewhat coarsely, abundantly, partially confluent punctate, with sparse yellowish-white pubescence, and somewhat long, erect setae of same color interspersed laterally; sides smooth, glabrous. Labrum coplanar, smooth, glabrous at posterior third, inclined, concave at anterior 2/3; inclined area with sparse yellowish-white pubescence close to coplanar area, and long yellow setae directed forward laterally; anterior margin with tuft of yellow setae centrally. Gula mentum transversely plicate-punctate (nearly smooth centrally), glabrous on posterior 2/3; area between eyes tumid, finely, abundantly punctate on each side of posterior region, nearly smooth anteriorly, and with bristly yellowish-white pubescence not obscuring integument (pubescence slightly more abundant centrally). Distance between upper eye lobes 0.04 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.39 times distance between outer margins of eyes. Antennae 1.75 times elytral length, reaching elytral apex at basal 2/5 of antennomere X. Scape somewhat coarsely and abundantly punctate, except posterior half of dorsal surface transversely plicate, with sparse punctures between them; without apical cicatrix; with sparse yellowish-white pubescence. Pedicel and antennomeres III–IX with abundant yellowish-white pubescence, especially from V. Antennomeres III–IV cylindrical, widened, lacking projection apically; antennomeres V–X serrate; antennomere XI not abruptly narrowed near apex. Antennal formula based on length of antennomere III: scape = 0.59; pedicel = 0.11; IV = 0.60; V = 0.87; VI = 0.87; VII = 0.87; VIII = 0.81; IX = 0.75; X = 0.69; XI = 0.94.

**Thorax.** Prothorax transverse (including lateral tubercles); lateral tubercles placed centrally. Pronotum coarsely, transversely plicate (irregular on center of posterior half); with somewhat abundant yellowish-white pubescence not obscuring integument (pubescence slightly more abundant laterally), except glabrous anterior and posterior sulci; minutely punctate between folds. Sides of prothorax with sculpturing and pubescence as on sides of pronotum, except anterior area almost smooth (this area widened toward prosternum), and posterior border and proepimeron rugose (posterior border almost glabrous). Prosternum almost smooth on posterior third, rugose from posterior third to anterior sulcus; with abundant, bristly whitish pubescence (slightly more yellowish anteriorly), except glabrous anterior sulcus. Prosternal process (Fig. 56) distinctly inclined apically; with abundant whitish pubescence on anterior 3/4, sparse, shorter, brownish apically; narrowest area 0.45 times the procoxal width. Ventral surface of meso- and metathorax with abundant whitish pubescence, obscuring integument on some areas, except for glabrous central area on mesoventrite and metathoracic discrimen. Mesoventral process slightly tumid on center of basal area; apical sides tab-shaped, and posterior margin strongly emarginated centrally. Scutellum with sparse yellowish pubescence centrally, distinctly dense on margins. **Elytra.** Minutely, densely punctate on basal half, and finely, abundantly punctate on posterior half; with abundant yellowish-white pubescence not obscuring integument; apex with outer triangular projection somewhat long, arched outward, and sutural angle with small projection. **Legs.** Femora finely, abundantly punctate (profemora slightly rugose on peduncle); with abundant yellowish-white pubescence partially obscuring integument. Tibiae with abundant yellowish-white pubescence partially obscuring integument, except for posterior third of profemora with bristly yellowish-brown pubescence on inner surface and ventral surface of apical third, and apical 2/3 of ventral surface of meso- and metatibiae with bristly yellowish-brown pubescence. Metatarsomere I shorter than II–III together.

**Abdomen.** Ventrites with abundant whitish pubescence partially obscuring integument, except glabrous apex of I–IV; apex of ventrite V almost truncate.

**Female** (Fig. 43–48, 57–58). Very similar to male, often differing by the shorter antennae (1.45 times elytral length, reaching elytral apex at posterior third of antennomere XI – only one female measured).

**Variation (males and females).** Punctures on frons slightly coarse, not differing from those on frontal plate; transversely plicate on dorsal area of scape with abundant punctures (especially in specimens from southeastern Brazil); tubercle on mesoventral process may or may not be present and, when present, it is very variable: from a slight tumescence to a distinctly elevated tubercle; antennae in males as long as in females; elytra minutely



Figures 50–58. *Hamaederus glaberrimus* (Martins, 1979). 50–56) Male. 50) Dorsal habitus. 51) Ventral habitus. 52) Lateral habitus. 53) Head, frontal view. 54) Scape. 55) Scape, pedicel, and antennomeres III–V. 56) Prosternal and mesoventral processes. 57–58) Female. 57) Dorsal habitus. 58) Prosternal and mesoventral processes.

or finely punctate throughout; outer projection of elytral apex, spiniform; outer projection of elytral apex from slightly to strongly arched outward.

**Dimensions (mm) (male (12)/female (22)).** Total length, 15.55–21.45/18.20–23.45; prothoracic length, 3.05–4.10/3.50–4.40; anterior prothoracic width, 2.65–3.40/2.95–3.70; posterior prothoracic width, 3.00–4.00/3.40–4.40; maximum prothoracic width, 3.80–5.15/4.30–5.60; humeral width, 4.10–5.70/4.80–6.30; elytral length, 9.70–13.60/11.50–15.20.

**Material examined.** BRAZIL, *Amazonas* (**new state record**): Manaus, ZF2, km 14, torre at 023521S / 600655W, 1 male, 13-16.IX.2004, F.F. Xavier F°, A.R. Ururahy, F. Godoi and S. Trovisco leg. (MZSP). *Minas Gerais*: Mar de Espanha, holotype female, 14.IX.1909, J.F. Zikán leg. (MZSP). *Rio de Janeiro*: Corcovado, 1 female, 31.VIII.1959, Alvarenga and Seabra leg. (MZSP); 1 male, 30.X.1970, Alvarenga and Seabra leg. (MZSP). BOLIVIA (**new country record**), *Santa Cruz*: 4 km SSE Buena Vista, Hotel Flora and Fauna, 1 male, 1 female, 17–19.X.2000, Wappes leg. (FSCA, formerly ACMT); 17°20'S / 63°39'W, 300–400 m, 1 male, 23.XI.2013, Skillman and Wappes leg. (SWLC); Buena Vista, Hotel Flora and Fauna, 1 male, 14–16.X.2000, Morris leg. (RFMC); 1 female, 19–22.X.2004, Morris and Wappes leg. (FSCA). *Cochabamba*: Vila Tunari, Hotel El Puente, 1158 ft, 16°59'S / 65°24'W, 1 male, 10–12.IX.2012, Wappes, Skelley and Bonaso leg. (MZSP, formerly ACMT). FRENCH GUIANA (**new country record**): Kaw Rd. 6, Amazone Nature Lodge, Montagne de Kaw, 4°33'N / 52°11'W, 970 ft, 1 male, 4 females, 11–23.VIII.2017, Wappes and Morris leg. (ACMT); Kaw Rd, pk 31, 1 female, 20–23.VIII.1995, Wappes leg. (MZSP, formerly ACMT); 2 females, 23.25.VIII.1995, Wappes leg. (FSCA, formerly ACMT); pk 32, 1 male, 3 females, 24.VIII.1995, Wappes leg. (FSCA, formerly ACMT); pk 39, 2 females, 19–20.VIII.1995, Wappes leg. (FSCA, formerly ACMT); 3 females, 20.VIII.1995, Wappes leg. (1 female MZSP, 2 females FSCA, formerly ACMT); Amazone Nature Lodge, Kaw Rd. 6, 4.550330 / –52.170310, 1 male, 2 females, 27.IX–6.X.2013, Morris and Wappes leg. (RFMC); 2 males, 11–23.VIII.2017, Morris and Wappes leg. (RFMC); Kaw Mt, Camp Caimans, 3 males, 26.VIII–7-IX.2019, J. Vlasak leg. (DHCO).

**Remarks.** *Hamaederus glaberrimus* was described based on a single specimen from Brazil (Minas Gerais). According to Martins (1979), the holotype is a male. However, it is a female. Although it was not mentioned in the original description, the posterior half of the dorsal surface of the scape of *H. glaberrimus* is transversely rugose (but also with distinct punctures), especially on the posterior third, and does not have an apical cicatrix as mentioned by Martins and Monné (2002).

### ***Hamaederus rusticus* (Gounelle, 1909), new combination**

(Fig. 59–64)

*Hammatochaerus rusticus* Gounelle 1909: 698.

*Brasilianus rusticus*; Blackwelder 1946: 561 (cat.); Zajciw 1966: 51; Martins 1979: 25; Fragoso 1982: 150; Monné 1993: 6 (cat.).

*Brasilianus* (*Brasilianus*) *rusticus*; Monné and Giesbert 1994: 35 (checklist).

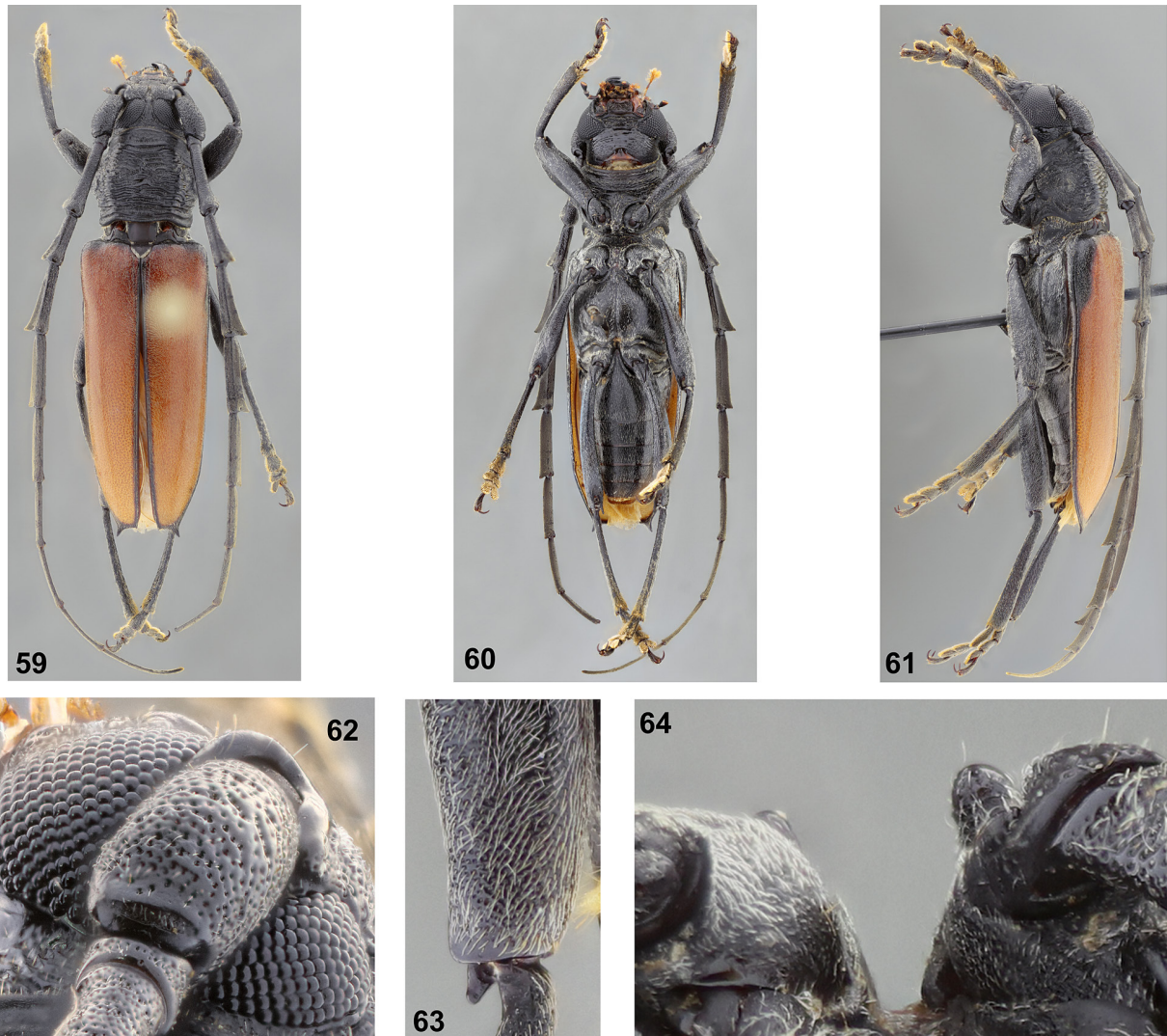
*Hamaticherus rusticus*; Aurivillius 1912: 51 (cat.).

*Plocaederus rusticus*; Martins and Monné 2002: 234; Monné 2005: 58 (cat.); Wappes et al. 2006: 7 (distr.); Monné and Hovore 2006: 36 (checklist); Morvan and Morati 2011: 15 (distr.); Galileo et al. 2011: 10, 89 (distr.); Wappes et al. 2018: 5 (distr.); Monné 2021: 76 (cat.).

**Remarks.** *Hamaederus rusticus* was described based on six syntypes (five males and one female – MNHN; one specimen – BMNH) from Brazil (Goiás). Currently, it is known from Brazil (Amazonas, Pará, Mato Grosso, Mato Grosso do Sul, Goiás, São Paulo), French Guiana, and Bolivia (Santa Cruz) (Monné 2021; Tavakilian and Chevillotte 2021).

According to the key proposed by Martins and Monné (2002) (translated): “Scape without apical cicatrix,” leading to *H. plicatus* (Olivier, 1790), *H. mirim* (Martins and Monné, 2002), *H. fasciatus* (Martins and Monné, 1975), and *H. pisinnus* (Martin and Monné, 1975) / Scape with apical cicatrix,” leading to *H. rusticus* and other species; and “Scape finely and densely punctate, without rugosities; apical region just with carina.” However, *H. rusticus* (Fig. 62), as well as *H. fasciatus* (Fig 24, 28), have an apical cicatrix on the apex of the scape.

**Material examined.** PERU (**new country record**), *San Martin*: Escalera Lodge, Tarapoto, 435 m, 2 males, 9–12.X.2012, J.B. Heppner leg. (FSCA)



Figures 59–64. *Hamaederus rusticus* (Gounelle, 1909), male from Peru. 59) Dorsal habitus. 60) Ventral habitus. 61) Lateral habitus. 62) Scape. 63) Apex of metafemora. 64) Prosternal and mesoventral processes, lateral view.

### *Hamaederus yucatecus* (Chemsak and Noguera, 1997), new combination

(Fig. 65–81)

*Hammaticherus glabricollis* Bates 1892: 147 (misidentification).

*Brasilianus yucatecus* Chemsak and Noguera 1997: 6; Toledo et al. 2002: 525 (distr.).

*Plocaederus yucatecus*; Turnbow et al. 2003: 6; Monné 2005: 58 (cat.); Hovore 2006: 371 (distr.); Monné and Hovore 2006: 36 (checklist); Swift et al. 2010: 12 (distr.); Maes et al. 2010: 75 (distr.); Audureau 2010: 3 (distr.); Galileo et al. 2011: 10 (distr.); Noguera et al. 2017: 460 (distr.); Monné 2021: 76 (cat.).

*Plocaederus confusus* Martins and Monné 2002: 243; Maia et al. 2003: 411 (distr.); Monné 2005: 56 (cat.); Wappes et al. 2006: 7 (distr.); Monné and Hovore 2006: 36 (checklist); Martins et al. 2009: 504 (distr.); Monné et al. 2010: 238 (distr.); Galileo et al. 2011: 10, 77 (distr.); Martins et al. 2014: 380 (distr.); Ferreira and Rocha 2015: 365 (distr.); Nascimento et al. 2016: 556 (distr.); Monné et al. 2017: 7 (holotype); Nascimento et al. 2017: 82 (distr.); Moura and Von Groll 2017: 440 (paratype); Lingafelter et al. 2017: 22; Wappes et al. 2018: 5 (distr.); Monné 2021: 73 (cat.). **New synonym.**

*Hammatocherus pactor* ? var. ?; Gounelle 1909: 607.

*Brasilianus pactor*; Buck 1959: 582 (not Lameere, 1885).

*Plocaederus barauna* Martins and Monné 2002: 239; Monné 2005: 56 (cat.); Galileo et al. 2011: 10, 75 (distr., hosts); Monné and Monné 2016: 7 (holotype); Monné 2021: 72. **New synonym**



**Figures 65–70.** *Hamaederus confusus* Martins and Monné, 2002 (= *H. yucatecus* (Chemsak and Noguera, 1997)). 65–67) Holotype male. 65) Dorsal habitus. 66) Ventral habitus. 67) Prosternal and mesoventral processes, lateral view. 68) Paratype female, dorsal habitus, from Brazil (São Paulo). 69) Paratype male, dorsal habitus, from Brazil (Rio de Janeiro). 70) Paratype male, dorsal habitus, from Brazil (São Paulo).

**Remarks.** Chemsak and Noguera (1997) described *H. yucatecus* based on a series of males and females from Mexico (Yucatán, Chiapas, Quintana Roo) and Guatemala (Zacapa). According to them, *H. yucatecus* differs from the other species of the *Brasilianus* present in Mexico by the small size. However, *Brasilianus mexicanus*



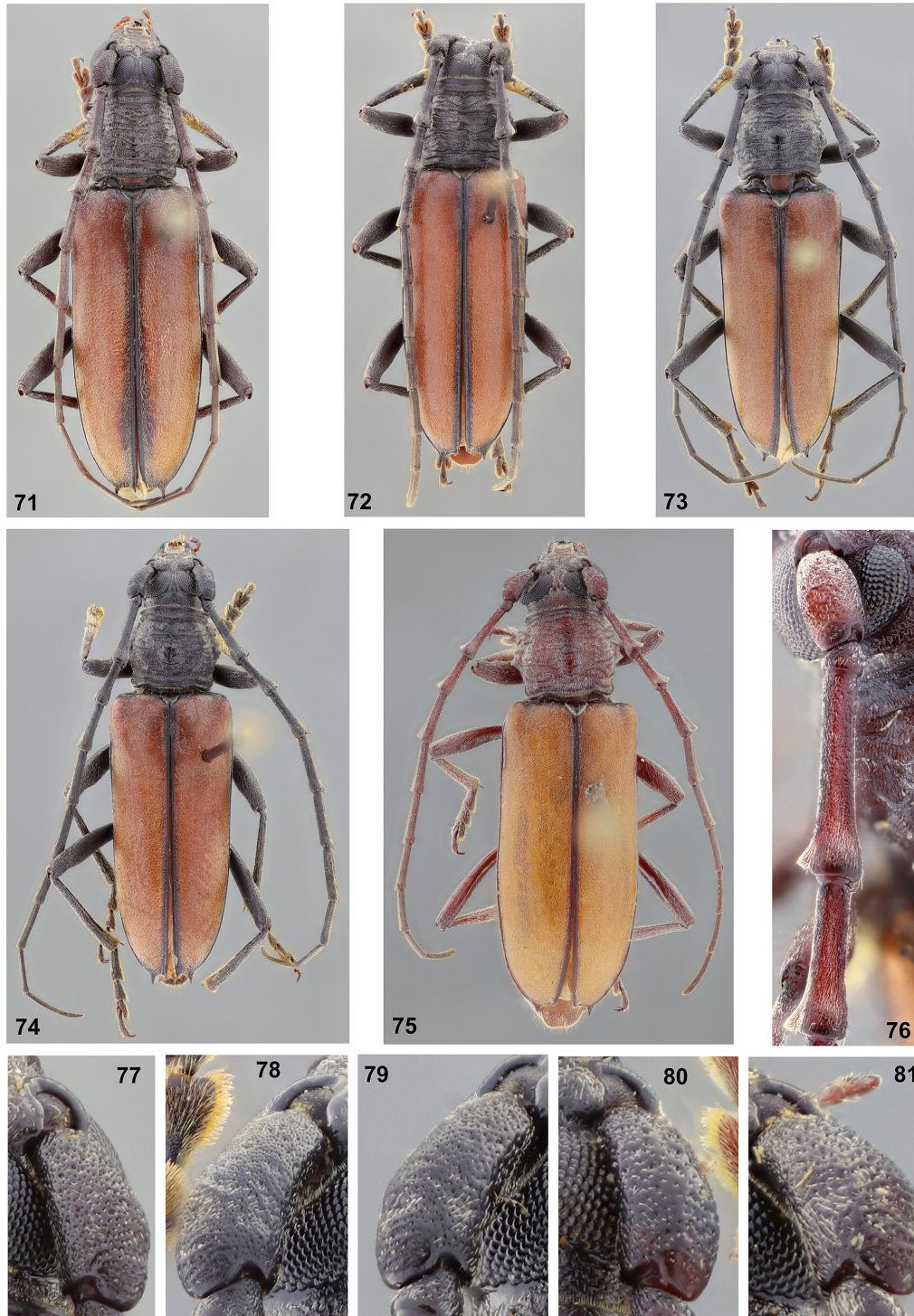
(Thomson, 1861) currently belongs to *Juiaparus* Martins and Monné, 2002, and *Brasilianus plicatus* (Olivier, 1790) sensu Lacordaire (1868) (= *Cerambyx rufipennis* Gory, 1831) currently belongs to *Jupoata* Martins and Monné, 2002. This species corresponds to *Hammaticherus glabricollis* sensu Bates (1892): “*Hab.* Mexico, Temax in North Yucatan (*Gaumer*). Three examples, females. The Yucatan examples resemble the unique specimen found by me on the Upper Amazons very closely, except that the 3rd and 4th antennal joints have dentiform processes at their inner apices, of which there is scarcely any trace in the type-specimen, and the spine at the sutural apex of the elytra is a little longer. They are, however, females, whilst the Amazons specimen is a male, and the spines may be a sexual character ...” The different shape of the antennal tubercles is not a sexual dimorphism, and both sexes of *H. yucatecus* have the apex of the antennomeres III and IV distinctly projected, and not nodose as in *H. glabricollis*. Therefore, Bates’ (1892) reference must be removed from *H. glabricollis* and included in that of *H. yucatecus*.

Later, Martins and Monné (2002) described *Plocaederus confusus* based on a large series of males and females from Bolivia (Chuquisaca) and Brazil (Ceará, Mato Grosso, Distrito Federal, Mato Grosso do Sul, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná). Currently, *Plocaederus confusus* is also known from the Brazilian states of Alagoas, Sergipe, Maranhão, Goiás, and Piauí, and from the Bolivian department of Santa Cruz (Monné 2021; Tavakilian and Chevillotte 2021). Probably, due to the geographical distribution, *Plocaederus confusus* was not compared with *H. yucatecus*. However, comparison of specimens from Mexico and Central America (Fig. 72–74) with South American specimens (Fig. 65, 68–70, 71) showed that there are no differences between *H. confusus* and *H. yucatecus*. The type series of *Plocaederus confusus* show that the elytral pubescence, as well as the black area on the elytra is highly variable. Accordingly, the former is synonymized with *H. yucatecus*.

Martins and Monné (2002) also described *Plocaederus barauna* (Fig. 75–76) based on males and females from Brazil (Paraíba, Pernambuco, Bahia). According to them, *P. barauna* differs from *P. confusus* by the antennomere III without spine on apex. However, comparison between the type series of *P. confusus* (Fig. 65, 68–70) and two paratypes of *P. barauna* (Fig. 76) showed that the antennomere III is the same in both species. Accordingly, *P. barauna* is also synonymized with *H. yucatecus*. The sculpturing of the scape (Fig. 77–81) in *H. yucatecus* is highly variable, regardless of where the specimen is from. Additionally, the apex of the dorsal surface of the scape may or may not be slightly rugose, and the projection of the apex of the antennomere III may or may not be distinctly projected (these variations also occur in the type series of *H. confusus*).

*Hamaederus yucatecus* (including *Plocaederus confusus* and *P. barauna*) is currently known from Mexico (Chiapas, Yucatán, Quintana Roo, Oaxaca), Guatemala, Honduras, Nicaragua, and Costa Rica, Bolivia (Santa Cruz), Brazil (Ceará, Alagoas, Sergipe, Piauí, Paraíba, Mato Grosso, Mato Grosso do Sul, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná) (Monné 2021; Tavakilian and Chevillotte 2021). Herein, we extend its geographical distribution to Colombia and Argentina, after the examination of a series of specimens.

**Material examined.** MEXICO, *Chiapas*: El Aguacero, 1 male, 26.VI.1989, P.K. and E.B. Lago leg. (MZSP, formerly ACMT); Chorreodero Canyon, 5 mi. E Chiapa de Corzo, 1 male, 15.VI.1986, Reifschneider, Thomas, Bazata and Cldwell leg. (FSCA, formerly ACMT); 16 km W Ocozocoautla at El Aguacero, 1 male, 10.VI.2009, Skillman and Hidelbrant leg. (FWSC). COSTA RICA, *Guanacaste*: 15 km SW Bagaces, 1 male, 14.II.1972, G. Frankie leg. (FSCA, formerly ACMT). COLOMBIA (**new country record**), *Bolívar*: San Jacinto, Reserva La Flecha, 324 m, 09°51'12.4"N / 75°10'41.4"W, 1 female, 15–16.IV.2018, Trampa de luz UV, Garcia leg. (MZSP); 09.852705°N / -75.17564°W, 1 male (MZSP), 1 female (MPUJ), 27.IV.2017, Trampa de luz, BST, I. Mendoza-Pérez leg. BOLIVIA, *Santa Cruz*: Potrerillo del Guendá, Snake Farm, 17°40'S / 63°27'W, 370–400 m, 1 female, 21–24.X.2011, Wappes and Skillman leg. (FSCA, formerly ACMT); 1 male, 10–12.XI.2011, Bettela, Bonaso and Romero leg. (FSCA formerly ACMT); 2 males, 19.XI.2013, Skillman and Wappes leg. (FWSC); 1 male, 22–14.IX.2012, Wappes and Skelley leg. (FSCA, formerly ACMT); Reserva Natural, 40 km NW Santa Cruz, 17°40'S / 63°27'W, 1 male, 30.IX–3.X.2007, Wappes and Morris leg. (FSCA); 8 km NW Terebinto, Javier Chaco, 17°41'S / 63°24'W, 2 males, 1 female, 1.XII.2012, Skillman, Wappes, Bonaso and Romero leg. (FWSC); Florida, 4 km N Bermejo, Refugio los Volcanes, 18°06'S / 63°36'W, 1000–1200 m, 1 female, 6–8.XII.2015, Skillman, Wappes and Kuckartz leg. (FWSC); 1 male, 28.X.2011, Skillman and Wappes leg. (FWSC); 1045–1350 m, 2 males, 2 females, 17–24.X.2014, Wappes and Morris leg. (FSCA, formerly ACMT); 3363', 1 male, 18–24.X.2014, Morris and Wappes leg. (RFMC); 2 females,



**Figures 71–81.** *Hamaederus yucatecus* (Chemsak and Noguera, 1997). **71**) Male from Bolivia, Santa Cruz (Buena Vista), dorsal habitus. **72**) Male from Costa Rica, Guanacaste (near Bagaces). **73**) Male from Mexico, Chiapas (near Ocozocoautla), dorsal habitus. **74**) Male from Mexico, Chiapas (El Chorreodero Canyon), dorsal habitus. **75–76**) *Plocaederus barauna* Martins and Monné, 2002 (= *H. yucatecus* (Chemsak and Noguera, 1997)), paratypes. **75**) Dorsal habitus, female. **76**) Antennomeres III–IV, male. **77–81**) Scape. **77**) Male from Bolivia. **78**) Male from Mexico. **79**) Male from Mexico. **80**) Paratype male of *P. confusus* from Brazil. **81**) Paratype female of *P. confusus* from Brazil.

1–10.X.2008, Morris and Wappes leg. (RFMC); 3400–4200 ft., 2 males, 16–20.IX.2012, Wappes, Skelley, Bonaso and Hamel leg. (FSCA formerly ACMT); Pampagrande, 1 female, 3.X.2011, Langer leg. (FSCA, formerly ACMT); Buena Vista, vic. Flora and Fauna Hotel, 1 female, 14–16.X.2000, R. Morris leg. (RFMC); 4 km SSE Buena Vista, Hotel Flora and Fauna, 17°29'S / 63°39'W, 300–400 m, 1 female, 20.X.2011, Skillman and Wappes leg. (FWSC); 1 female, 17.X.2011, Skillman and Wappes leg. (FWSC); 1 female, 23.XI.2013, Skillman and Wappes leg. (FWSC); 1 female, 3 males, 17–20.X.2000, Morris leg. (RFMC); 1 female, 17–19.X.2000, Skillman and Wappes leg. (FWSC); 1 female, 17–20.X.2000, Morris leg. (FSCA); 1 female, 22–31.X.2002, Wappes and Morris leg. (FSCA, formerly ACMT); 1 male, 2–14.X.2003, R. Clarke leg. (FSCA, formerly ACMT); 1 female, 3–8.X.2004, Wappes and Morris leg. (FSCA, formerly ACMT); 430 m, 2 females, 14–19.X.2000, M.C. Thomas leg. (FSCA); 2 males, 17–19.X.2000, Wappes and Morris leg. (FSCA, formerly ACMT); 8 km SE Buena Vista, 1 female, 24.X.1992, E. Giesbert leg. (FSCA); 1 female, 18–25.X.1992, E. Giesbert leg. (FSCA); Achira Camp, 1360 m, 18°09'49"S / 63°48'83"W, 1 male, 14–15.X.2006, Wappes, Nearn and Eya leg. (MZSP, formerly ACMT). ARGENTINA (**new country record**), *Corridoba*: Rt. 20 km 834, 4 km E Tanninga, 1 male, no date indicated, Cordo, Stange and Woodruff leg. (FSCA).

### ***Hamaederus allofasciatus* Santos-Silva, Garcia and Botero, new species**

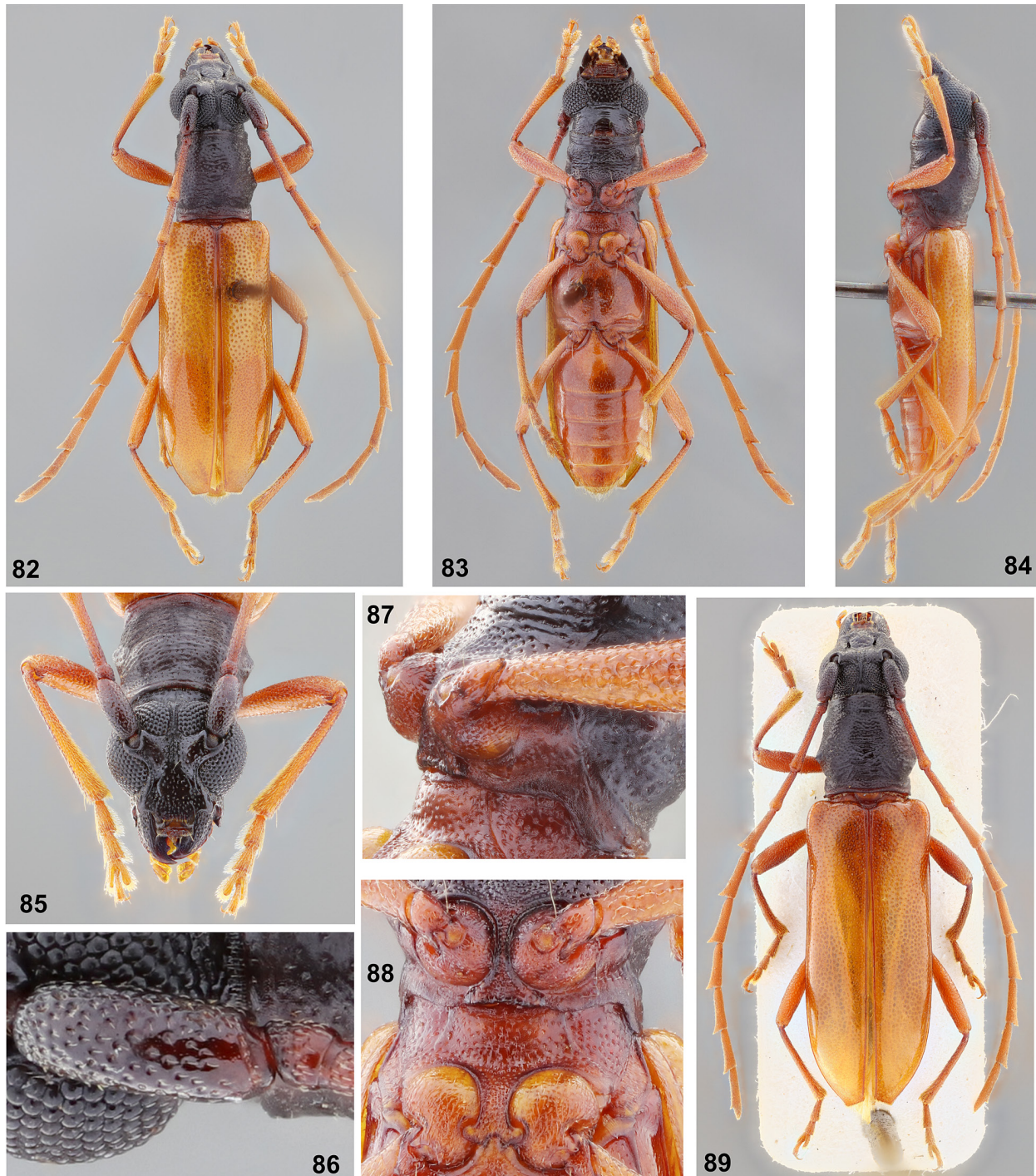
(Fig. 82–89)

*Brasilianus* (*Brasilianus*) *fasciatus*; Monné and Giesbert 1994: 34 (checklist; *partim*).

*Placaederus fasciatus*; Martins and Monné 2002: 231 (*partim*); Monné 2005: 56 (cat.; *partim*); Monné and Hovore 2006: 36 (checklist; *partim*); Morvan and Morati 2006: 10 (distr.); 2011: 15 (distr.); Monné 2021: 73 (cat.; *partim*).

**Description. Holotype male** (Fig. 82–88). Head capsule and prothorax black (posterior area of ventral surface slightly lighter); anteclypeus and labrum mostly brownish; posterior region of ventral mouthparts brown, and anterior area yellowish-brown; scape black, slightly lighter apically; pedicel brown; basal third of antennomere III brownish and remaining surface orangish-brown; remaining antennomeres orangish-brown; ventral surface of meso- and metathorax and abdomen reddish-brown, with some irregular areas orangish-brown, and margins of thoracic sclerites darkened. Elytra orangish-brown, slightly darkened on circum-scutellar region and slightly distinct area after middle. Legs orangish-brown.

**Head.** Frons finely, somewhat sparsely punctate, absent on inferior sides of frontal plate; with minute, sparse white setae, slightly more abundant close to eyes. Area between antennal tubercles finely, confluent punctate, especially centrally; with minute, sparse white setae, and a few long, erect setae of same color. Area between upper eye lobes centrally carinated, rugose between eyes and carina; with a few minute white setae on rugose area. Remaining area of vertex almost smooth, except a few coarse punctures on sides of posterior area, and finely, somewhat abundant punctate area close to eyes; with minute white setae close to eyes, and a few long, erect setae of same color on same area. Area behind upper eye lobes somewhat rugose-punctate; with minute, sparse yellowish-white setae close to eye. Area behind lower eye lobes coarsely, sparsely punctate (punctures elongated), glabrous. Genae coarsely, somewhat rugose-punctate close to eye, nearly smooth apically; with minute white pubescence on rugose-punctate area. Antennal tubercles finely, sparsely punctate, except smooth apex; with minute, sparse white setae on punctate area, glabrous on smooth area. Wide central area of postclypeus finely, somewhat abundantly punctate, and sides smooth; punctures with minute white seta; with one long, erect translucent seta on each side of wide central area close to frons. Labrum with long yellowish setae laterally on posterior area coplanar with anteclypeus; anterior area with long, abundant yellowish setae directed forward centrally. Gulamentum sparsely, transversely plicate, glabrous on posterior area, coarsely, moderately abundantly punctate between eyes (general appearance somewhat rugose), punctures with short, erect whitish seta. Distance between upper eye lobes 0.06 times distance between outer margins of eyes; in frontal view, distance between lower eye lobes 0.37 times distance between outer margins of eyes. Antennae 1.75 times elytral length, reaching elytral apex at basal quarter of antennomere X. Scape coarsely, abundantly punctate, except smooth apical area; with whitish pubescence not obscuring integument, except glabrous smooth areas. Antennomeres III–V with whitish pubescence not obscuring integument, and remaining antennomeres with denser yellowish pubescence; antennomeres III and IV cylindrical with nodose apex; antennomeres V–X serrate; antennomere XI abruptly narrowed near apex. Antennal formula based on length of antennomere III: scape = 0.71; pedicel = 0.16; IV = 0.75; V = 0.91; VI = 0.87; VII = 0.79; VIII = 0.73; IX = 0.71; X = 0.67; XI = 0.87.



Figures 82–89. *Hamaederus allofasciatus* sp. nov. 82–88) Holotype male. 82) Dorsal habitus. 83) Ventral habitus. 84) Lateral habitus. 85) Head, frontal view. 86) Scape. 87) Prosteral process, oblique view. 88) Prosteral and mesoventral processes. 89) Paratype female, dorsal habitus.

**Thorax.** Prothorax slightly wider than long (including lateral tubercles); lateral tubercles placed slightly after middle. Pronotum somewhat coarsely, abundantly, slightly plicate-punctate on anterior half, transversely more distinctly plicate-punctate on posterior half, except central area of posterior half only transversely plicate, and area of posterior constriction only punctate; punctures with minute whitish seta. Sides of prothorax

somewhat coarsely and abundantly punctate, except for anterior area nearly smooth (this area widened toward prosternum), and posterior border and proepimeron densely microsculptured, with oblique band of shallow punctures toward procoxal cavity; punctures on wide central area with minute white seta. Prosternum coarsely, somewhat sparsely punctate on sides of posterior third, finely, densely punctate on central area of posterior quarter, coarsely, rugose-punctate on wide central region, especially on middle of this area, plicate on anterior quarter; with minute, sparse whitish setae on posterior  $\frac{3}{4}$ , glabrous on anterior quarter. Prosternal process (Fig. 87) gradually inclined toward apex; narrowest area 0.15 times procoxal width. Mesoventrite coarsely, abundantly punctate, punctures with short yellowish-white seta. Mesanepisternum and mesepimeron with coarsely, somewhat abundantly punctate; punctures with short yellowish-white seta; mesoventral process without tubercle, with apical sides tab-shaped, and posterior margin strongly emarginated centrally; surface somewhat finely, densely punctate; narrowest area 0.39 times mesocoxal width. Metanepisternum and metaven-trite finely, sparsely punctate; with short, sparse, decumbent whitish setae, except smooth posterior area close to metathoracic discri-men smooth and glabrous. Scutellum with minute whitish setae on sides. **Elytra.** Coarsely, abundantly punctate on basal half, punctures distinctly finer on posterior half; nearly all punctures with minute yellowish-white seta; apex slightly oblique, truncate. **Legs.** Femora coarsely, densely, shallowly punctate; with sparse white pubescence, slightly denser toward apex. Tibiae with somewhat sparse yellowish-white setae, except dense, bristly light yellowish-brown pubescence on posterior area of ventral surface. Metatarsomere I shorter than II–III together.

**Abdomen.** Ventrites finely, somewhat sparsely punctate; with sparse whitish pubescence, slightly denser laterally; apex of ventrite V subtruncate.

**Female** (Fig. 89). Very similar to male, differing especially by the antennae slightly shorter (1.6 times elytral length, reaching elytral apex at base of antennomere XI).

**Variation.** Posterior area of vertex and area behind upper eye lobes coarsely, transversely plicate-punctate.

**Dimensions (mm) (holotype male/paratype male/paratype female).** Total length, 8.05/8.10/9.70; prothoracic length, 1.55/1.60/1.85; anterior prothoracic width, 1.25/1.25/1.50; posterior prothoracic width, 1.35/1.40/1.65; maximum prothoracic width, 1.55/1.65/2.00; humeral width, 1.95/2.00/2.40; elytral length, 4.85/5.05/6.00.

**Type material.** Holotype male from FRENCH GUIANA: Kaw Rd pk 41, 19.VIII.1995, J.E. Wappes leg. (FSCA, formerly ACMT). Paratypes – FRENCH GUIANA: Montagne de Kaw, PK 4, 1 male, 29.VIII.1986, light trap, Gérard Tavakilian leg. (OMPC); Kaw Rd pk 18, 1 male, 26.VIII.1995, J.E. Wappes leg. (MZSP, formerly ACMT); Montagne de Kaw PK 36, 7.IX.1991, light trap, Joannes Chacun-Francoz leg. (OMPC); Montagne de Kaw PK 43, 26.VIII.1992, light trap, Jean A. Cerda leg. (OMPC); Montagne de Kaw, PK 45,5, 1 male, 11.X.1986, light trap, Odette Morvan leg. (OMPC); Kaw Rd pk 46, 1 female, 29.VIII.1986, G.L. Tavakilian leg. (MZSP); Route de Kaw, pk 32, 1 male, 24.IX.2003, A. Audureau leg. (DHCO); Route de Kaw pk 47, 1 male 10.IV.1991, light trap, Odette Morvan leg. (OMPC); 3 males, 10.VIII.1991, UV light trap, J.L. Giuglaris leg. (JLGC); Piste de Bélizon pk 24, 1 female, 15.VIII.1999, UV light trap, J. Hulin/JL Giuglaris leg. (JLGC); Petit Saut pk 3 Sinnamary, 1 female, 24.VIII.2006, light trap (PHDC); Grand Bœuf Mort Saül, 1 female, 14.IX.2007, light trap (PHDC); Montagne Pelée Saül, 1 male, 05.X.2010, light trap (PHDC); Route de Kaw pk 37, 2 males, 9–12.IX.1999, light trap, A. Audureau leg. (AACP); Route de Kaw pk 37, 1 female, 20.XI.2000, light trap, A. Audureau leg. (AACP); Route de Kaw pk 29, 1 female, 15–19.XI.2006, light trap, A. Audureau leg. (AACP); Roura, 1 specimen, IX.2009, J.L. Giuglaris leg. (HSCV).

**Etymology.** From the Greek “allos/αλλος”, meaning “other” or “different,” and “fasciatus”; indicating that it is different from *Hamaederus fasciatus*.

**Remarks.** *Hamaederus allofasciatus* is similar to *H. fasciatus* (Martins and Monné, 1975) but differs as follows: scape black, slightly lighter apically; pedicel brown; basal third of antennomere III brownish; posterior half of pronotum distinctly plicate-punctate; prosternal process gradually inclined toward apex (Fig. 87); mesoventral process (Fig. 88) distinctly narrower; elytra without transverse dark brown band. In *H. fasciatus*, the scape, pedicel, and antennomere III are orangish-brown, posterior half of pronotum not distinctly plicate-punctate, prosternal process abruptly inclined posteriorly (Fig. 32), sometimes somewhat tuberculate centrally near apex, mesoventral process distinctly wider (Fig. 33), and elytra with transverse dark brown band.

The following list of Cerambycini genera and species reflects the taxonomic changes made based on the result of our study.

**Hamaederus Santos-Silva, García and Botero, new genus**

**Type species.** *Plocaederus bipartitus* Buquet, 1860, here designated.

*Hamaederus allofasciatus* Santos-Silva, García and Botero, **new species**

*Hamaederus bipartitus* (Buquet, 1860), **new combination**

*Hamaederus dozieri* (Martins and Galileo, 2010), **new combination**

*Hamaederus fasciatus* (Martins and Monné, 1975), **new combination**

*Hamaederus fragosoi* (Martins and Monné, 2002), **new combination**

*Hamaederus fraterculus* (Martins, 1979), **new combination**

*Hamaederus glaberrimus* (Martins, 1979), **new combination**

*Hamaederus glabricollis* (Bates, 1870), **new combination**

*Hamaederus inconstans* (Gounelle, 1913), **new combination**

*Hamaederus mirim* (Martins and Monné, 2002), **new combination**

*Hamaederus pactor* (Lameere, 1885), **new combination**

*Hamaederus pisinnus* (Martins and Monné, 1975), **new combination**

*Hamaederus plicatus* (Olivier, 1790), **new combination**

*Hamaederus rugosus* (Olivier, 1795), **new combination**

*Hamaederus rusticus* (Gounelle, 1909), **new combination**

*Hamaederus yucatecus* (Chemsak and Noguera, 1997), **new combination**

= *Plocaederus barauna* Martins and Monné, 2002, **new synonym**

= *Plocaederus confusus* Martins and Monné, 2002, **new synonym**

**Plocaederus Dejean, 1835**

= *Hamaticherus* Audinet-Serville, 1834 (not Dejean, 1821)

**Type species.** *Hamaticherus bellator* Audinet-Serville, 1834; designated by Sama (1991)

*Plocaederus bellator* (Audinet-Serville, 1834), **new combination**

**Cerambyx Linnaeus, 1758**

= *Hamaticherus* Dejean, 1821 (Type species *Cerambyx heros* (Scopoli, 1763), designated by Chevrolat (1845), currently senior synonym of *Cerambyx cerdo* Linnaeus, 1758)

## Acknowledgments

We express our sincere thanks to Steven W. Lingafelter (SWLC), for sending photographs and information on a specimen of *H. bipartitus*; to Roy F. Morris (RFMC), Frederick W. Skillman (FWSC), and Daniel Heffern (DHCO) for sending specimens; and to Pierri-Henri Dalens (PHDC), Alan Audureau (AACP), Hebert Schmid (HSCV), Odette Morvan, and Jean Louis Giuglaris (JLGC) for sending paratype information. We would like to mention the late James E. Wappes, who sent us specimens from his collection (now deposited with the FSCA), as well as gathering material from the FSCA collection. We also thank Miguel Alonso-Zarazaga (Museo Nacional de Ciencias Naturales, Spain) and Mario Cupello (Universidade Federal de Paraná, Brazil) for the help in the discussion about the names *Hamaticherus* and *Plocaederus*.

We are also in debt to Larry G. Bezark (California, USA) and Eugenio H. Nearn (Washington D.C., USA) for valuable corrections and suggestions concerning the previous version of the manuscript.

The second and third author thank to “Fundação de Amparo à Pesquisa do Estado de São Paulo” (FAPESP) for their fellowship (process number 2019/13603-1 and 2017/17898-0, respectively).

## Literature Cited

- Audinet-Serville JG. 1834.** Nouvelle classification de la famille des longicornes. (suite). Annales de la Société Entomologique de France 3(1): 5–110.
- Audureau A. 2010.** Complément à l’inventaire faunistique des Cerambycidae de la réserve privée forestière de Domitila (Nicaragua) avec description de nouvelles espèces (Coleoptera, Cerambycidae). Les Cahiers Magellanes 110: 1–10.

- Aurivillius C. 1912.** Cerambycidae: Cerambycinae. Coleopterorum Catalogus, pars 39. W. Junk; Berlin. 574 p.
- Bates HW. 1870.** Contributions to an insect fauna of the Amazon Valley (Coleoptera: Cerambycidae). The Transactions of the Entomological Society of London 1870: 243–335.
- Bates HW. 1879.** Tribe Longicornia. p. 1–16. In: Godman FD, Salvin O. (eds.). Biologia Centrali-Americana. Vol. 5. Taylor and Francis; London. xii + 525 p. [1879–1885].
- Bates HW. 1892.** Additions to the Longicornia of Mexico and Central America, with remarks on some of the previously recorded species. The Transactions of the Entomological Society of London 1892: 143–183.
- Bezark LG. 2021.** A photographic Catalog of the Cerambycidae of the World. New World Cerambycidae Catalog. Available at <http://bezbycids.com/byciddb/wdefault.asp?w=n/> (Last accessed 15 July 2021.)
- Blackwelder RE. 1946.** Checklist of the coleopterous insects of Mexico, Central America, the West Indies and South America. Part 4. Bulletin of the United States National Museum 185: 551–763.
- Bousquet Y, Bouchard P. 2013.** The genera in the second catalogue (1833–1836) of Dejean's Coleoptera collection. ZooKeys 282: 1–219.
- Buck P. 1959.** Cerambycidae in der Sammlung des Instituto Anchieta de Pesquisas. Pesquisas 3: 577–609.
- Buquet JBL. 1860.** Description de quelques longicornes nouveaux. Annales de la Société Entomologique de France (3)8: 617–628.
- Chemsak JA, Noguera FA. 1997.** New Mexican Cerambycidae (Coleoptera). Occasional Papers of the Consortium Coleopterorum 1(1): 6–14.
- Chenu JC. 1860.** Encyclopédie d'histoire naturelle ou traité complet de cette science d'après les travaux des naturalistes les plus éminents de tous les pays et de toutes les époques Buffon, Daubenton, Lacépède, G. Cuvier, F. Cuvier, Geoffroy Saint-Hilaire, Latreille, de Jussieu, Brongniart, etc., etc. Ouvrage résumant les observations des auteurs anciens et comprenant toutes les découvertes modernes jusqu'à nos jours. Coléoptères buprestiens, scarabéiens, piméliens, curculioniens, scolytiens, chrysoméliens, etc. Avec la collaboration de M.E. Desmarest, du Muséum d'Histoire naturelle, secrétaire de la Société Entomologique de France, etc. Troisième partie. Marescq et Compagnie; Paris. 360 p.
- Chevrolat LA. 1845.** *Hammaticherus*. p. 466. In: D'Orbigny CVD. Dictionnaire universel d'histoire naturelle résumant et complétant tous les faits présentés par les encyclopédies, les anciens dictionnaires scientifiques, les oeuvres complètes de Buffon, et les meilleurs traités spéciaux sur les diverses branches des sciences naturelles; donnant la description des êtres et des divers phénomènes de la nature, l'étymologie et la définition des noms scientifiques, les principales applications des corps organiques et inorganiques, à l'agriculture, à la médecine, aux arts industriels, etc. dirigé par M. Charles d'Orbigny, et enrichi d'un magnifique atlas de planches gravées sur acier. Volume 6. MM. Renard, Martinet et Cie; Paris. 792 p.
- Chevrolat LA. 1861.** Réflexions et notes synonymiques sur le travail de M. James Thomson sur les Cérambycides, avec descriptions de quelques nouvelles espèces. The Journal of Entomology 1: 245–254.
- Dejean PFMA. 1821.** Catalogue de la collection de coléoptères de M. le Baron Dejean. Crevot; Paris. viii + 136 + ii p.
- Dejean PFMA. 1835.** Catalogue des coléoptères de la collection de M. le Comte Dejean. Méquignon-Marvis; Paris. p. 257–360.
- Dejean PFMA. 1836.** Catalogue des coléoptères de la collection de M. le comte Dejean. Troisième édition, revue, corrigée et augmentée. Méquignon-Marvis Pere et Fils; Paris. xiv + p. 1–384.
- Ferreira AS, Rocha AA. 2015.** Cerambycidae (Coleoptera) from Lagoa de Tamburi farm, Aracatu, Bahia – with new records. Papéis Avulsos de Zoologia 55(25): 363–371.
- Fragoso SA. 1971.** Segunda nota preliminar a uma futura revisão dos Cerambycini neotropicais. (Coleoptera, Cerambycidae). Atas de Sociedade de Biologia 15(1): 7–9.
- Fragoso SA. 1982.** An annotated, preliminary key to neotropical Cerambycini genera. (Coleoptera, Cerambycidae). Revista Brasileira de Entomologia 26(2): 141–161.
- Fragoso SA. 1993.** On old and new species of *Coleoxestia* Aurivillius, 1912 (Coleoptera, Cerambycidae, Cerambycini). Revista Brasileira de Biologia 53(3): 327–343.
- Fragoso SA, Tavakilian GL. 1985.** *Hirtobrasilianus*, nouveau sous-genre de *Brasilianus* Jakobson, 1924 (Coleoptera, Cerambycidae, Cerambycini). L'Entomologiste 41(5): 229–240.
- Galileo MHM, Martins UR, Moyses E. 2011.** Cerambycidae Sul-Americanos (Coleoptera). Suplemento 3. Museu de Ciências Naturais da Fundação Zoobotânica do Rio Grande do Sul; Porto Alegre. 101 p.
- Gemminger M. 1872.** Familia LXVI. Cerambycidae. p. 2751–2988. In: Gemminger M, Harold E. Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus. V. 9. Sumptu E. H. Gummi (G. Beck); Munich. 320 p. [2669–2988]
- Germar EF. 1823.** Insectorum species novae aut minus cognitae, descriptionibus illustratae. Hendel and Sons; Halae. xxiv + 624 p. + 2 pls.
- Girard M. 1873.** Les insectes. Traité élémentaire d'entomologie comprenant l'histoire des espèces utiles et de leurs produits,

- des espèces nuisibles et des moyens de les détruire, l'étude des métamorphoses et des mœurs, les procédés de chasse et de conservation. Avecplanches coloriées. Introduction - Coléoptères. J.-B. Baillière et Fils; Paris. viii + 840 p.
- Giuglaris JL. 2012.** Les longicornes en zone littorale de Guyane: échantillonnage de la zone agricole Wayabo de Matiti (Coleoptera, Cerambycidae). *ACOREP-France; Coleoptères de Guyane* 6: 53–65.
- Gounelle E. 1909.** Liste des cérambycides de la région de Jatahy, Etat de Goyaz, Brésil. *Annales de la Société Entomologique de France* 77: 587–688.
- Gounelle E. 1913.** Chasses de M. E.-R. Wagner, correspondant du Muséum, dans les provinces du Nord de la République Argentine. Cérambycides nouveaux ou peu connus. *Bulletin du Muséum National d'Histoire Naturelle* 19: 193–231.
- Heyne A, Taschenberg O. 1907.** Die exotischen Käfer in Wort und Bild. Begonnen von Alexander Heyne. Fortgeführt und vollendet von Dr. Otto Taschenberg. G. Reusche; Leipzig. vii + 262 p.
- Hovore FT. 2006.** The Cerambycidae (Coleoptera) of Guatemala, p. 363–378. In: Cano E. (ed.). *Biodiversidad de Guatemala*. Vol. 1. Universidad del Valle de Guatemala; Guatemala City. vi + 674 p.
- ICZN [International Commission on Zoological Nomenclature]. 1999.** International code of zoological nomenclature. Fourth edition. International Trust for Zoological Nomenclature; London. 306 p.
- Jakobson GG. 1924.** Annotationes synonymicae et systematicae de coleopteris. *Revue Russe d'Entomologie* 18: 237–243.
- Lacordaire JT. 1868.** Histoire Naturelle des Insectes. Genera des Coléoptères, ou exposé méthodique et critique de tous les genres proposés jusqu'ici dans cet ordre d'insectes. Vol. 8. Librairie Encyclopédique de Roret; Paris. 552 p.
- Lameere AA. 1885.** Note sur quelques longicornes du Paraguay. *Comptes Rendus de la Séance de la Société Entomologique Belgique* 29: lxi–lxii.
- Laporte FLN. 1840.** Histoire Naturelle des Insectes Coléoptères avec une introduction renfermant l'anatomie et la physiologie des animaux articulés, par M. Brullé; ouvrage accompagné de 155 planches gravées sur acier représentant plus de 800 sujets. Vol. 2. P. Duménil; Paris. 563 p.
- LeConte JL. 1873.** Classification of the Coleoptera of North America. Part II. *Smithsonian Miscellaneous Collections* 11(265): 279–348.
- LeConte JL, Horn GH. 1883.** Classification of the Coleoptera of North America. Prepared for the Smithsonian Institution. *Smithsonian Miscellaneous Collections* 26(507): i–xxxvii, 1–567.
- Leng CW. 1884.** Synopses of the Coleoptera (Cerambycidae). *Bulletin of the Brooklyn Entomological Society* 7(8): 112–116.
- Lingafelter SW, Wappes JE, Ledezma Arias J. 2017.** Photographic guide to longhorned beetles of Bolivia. Smithsonian Institution Scholarly Press; Washington DC. xxvi + 260 p.
- Maes J-M, Berghé E, Dauber D, Audureau A, Nearns E, Skillman F, Heffern D, Monné MA. 2010.** Catalogo ilustrado de los Cerambycidae (Coleoptera) de Nicaragua. Parte II – Cerambycinae. *Revista Nicaraguense de Entomología* 70 (Suplemento 1–2): 1–640.
- Maia ACD, Iannuzzi L, Nobre CEB, Albuquerque CMR. 2003.** Padrões locais de diversidade de Cerambycidae (Insecta, Coleoptera) em vegetação de caatinga. p. 391–433. In: Leal IR, Tabarelli M, Silva JMC. (orgs.). *Ecologia e Conservação da Caatinga*. Editora Universitária da Universidade Federal de Pernambuco; Recife. 804 p.
- Martins UR. 1979.** Notas e descrições em *Brasilianus* Jakobson, 1924 (Coleoptera, Cerambycidae). *Revista Brasileira de Entomologia* 23(1): 23–28.
- Martins UR, Galileo MHM. 2010.** Novo registro e novas espécies de Cerambycinae (Coleoptera, Cerambycidae) de Trinidad and Tobago e da Venezuela. *Revista Brasileira de Entomologia* 54(4): 565–570.
- Martins UR, Monné MA. 1975.** Longicórnios da coleção Hüdepohl (Coleoptera, Cerambycidae). *Papéis Avulsos de Zoologia* 28(16): 269–293.
- Martins UR, Monné MA. 2002.** Tribo Cerambycini. p. 145–248. In: Martins UR (org.). *Cerambycidae Sul-Americanos* (Coleoptera). Volume 4. Sociedade Brasileira de Entomologia; São Paulo. iv + 265 p.
- Martins UR, Galileo MHM, Limeira-de-Oliveira F. 2009.** Cerambycidae (Coleoptera) do Estado do Maranhão, Brasil. II. *Papéis Avulsos de Zoologia* 49(38): 503–527.
- Martins UR, Galileo MHM, Tavakilian GL. 2008.** Novos Cerambycidae (Coleoptera) da coleção Odette Morvan, Kaw, Guiana Francesa. III. *Papéis Avulsos de Zoologia* 48(25): 281–287.
- Martins UR, Santos-Silva A, Galileo MHM, Limeira-de-Oliveira F. 2014.** Cerambycidae (Coleoptera) dos estados do Piauí e Ceará, Brasil: espécies conhecidas, nova tribo, nova espécie e novos registros. *Iheringia (Série Zoologia)* 104(3): 373–384.
- Megerle JCM. 1801.** *Catalogus insectorum, quae Viennae Austriae die XIV. et sequentibus. Decembris MDCCCI. Auctionis lege distrahuntur.* Vienna. 16 p.
- Megerle JCM. 1802a.** *Appendix ad catalogum insectorum, quae mense Decembris MDCCCI. Viennae Austriae auctionis lege vendita fuere.* Vienna. 6 p.
- Megerle JCM. 1802b.** *Catalogus insectorum, quae Viennae Austriae die IX. et sequentibus Novembris MDCCCII. Auctionis lege distrahuntur.* Vienna. 28 p.



- Megerle JCM. 1803a.** Appendix ad catalogum insectorum, quae mense Novembris MDCCCII. Viennae Austriae auctionis lege vendita fuere. Vienna. 18 p.
- Megerle JCM. 1803b.** Catalogus insectorum, quae Viennae Austriae die 28, Novembris 1803. Auctionis lege distrahuntur. Vienna. 36 p.
- Megerle JCM. 1804a.** Appendix ad catalogum insectorum, quae mense Novembris MDCCCIII. Auctionis lege vendita fuere. Vienna. 8 p.
- Megerle JCM. 1804b.** Catalogus duarum collectionum Eleuterorum die XIV, Maji MDCCCIV. Viennae Austriae auctionis lege vendendarum. Vienna. 8 p.
- Megerle JCM. 1804c.** Catalogus insectorum, quae Viennae Austriae die XX, et sequentibus Septembris MDCCCIV. Auctionis lege distrahuntur. Vienna. 24 p.
- Megerle JCM. 1804d.** Appendix ad catalogum insectorum, quae mense Septembris MDCCCIV. Viennae Austriae auctionis lege vendita fuere. Vienna. 12 p.
- Megerle JCM. 1805a.** Catalogus insectorum, quae Viennae Austriae die [day not indicated] Junii MDCCCIV. Auctionis lege distrahuntur. Vienna. 25 p.
- Megerle JCM. 1805b.** Appendix ad catalogum insectorum, quae mense Junii MDCCCIV. Viennae Austriae auctionis lege vendita fuere. Vienna. 10 p.
- Monné MA. 1993.** Catalogue of the Cerambycidae (Coleoptera) of the Western Hemisphere. Part III. Subfamily Cerambycinae: Tribes Cerambycini, Diorini and Piezocerini. Sociedade Brasileira de Entomologia; São Paulo. 52 p.
- Monné MA. 2005.** Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part I. Subfamily Cerambycinae. Zootaxa 946: 1–765.
- Monné MA. 2012.** Catalogue of the type-species of the genera of the Cerambycidae, Disteniidae, Oxypeltidae and Vesperidae (Coleoptera) of the Neotropical Region. Zootaxa 3213: 1–183.
- Monné MA. 2021.** Catalogue of the Cerambycidae (Coleoptera) of the Neotropical region. Part I. Subfamily Cerambycinae. Available at <https://cerambycids.com/catalog/> (Last accessed 15 July 2021.)
- Monné MA, Giesbert EF. 1994.** Checklist of the Cerambycidae and Disteniidae (Coleoptera) of the Western Hemisphere. Wolfsgarden Books; Burbank. 409 p.
- Monné MA, Hovore FT. 2006.** A Checklist of the Cerambycidae, or longhorned wood-boring beetles, of the Western Hemisphere. BioQuip Publications; Rancho Dominguez. 393 p.
- Monné MA, Monné ML. 2016.** Checklist of Cerambycidae (Coleoptera) primary types of the Museu Nacional, Rio de Janeiro, Brazil, with a brief history of the collection. Zootaxa 4110(1): 1–90.
- Monné MA, Santos-Silva A, Casari AS, Monné ML. 2017.** Checklist of Cerambycidae, Disteniidae and Vesperidae (Coleoptera) primary types of the Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil. Zootaxa 4249(1): 1–104.
- Monné ML, Monné MA, Martins RS, Simões MVP, Machado VS. 2010.** Espécies de Cerambycidae (Insecta, Coleoptera) ocorrentes no Estado do Rio de Janeiro (Brasil). Arquivos do Museu Nacional 67(3–4): 235–251.
- Morvan O, Morati J. 2006.** Contribution a la connaissance des Cerambycidae de la montagne de Kaw, Guyane Française (Coleoptera). Lambillionia 106(3, suppl. 2): 3–62.
- Morvan O, Morati J. 2011.** Inventaire des Cerambycidae (Coleoptera) de Guyane. I. Supplement au Bulletin de liaison d'ACOREP-France «Le Coléoptériste» 3: 10–45.
- Moura LA, Von Groll E. 2017.** Catalogue of Coleoptera type specimens housed in the collection of the Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul, Brazil. Zootaxa 4318(3): 439–473.
- Nascimento FEL, Botero JP, Bravo F. 2016.** Checklist of the Cerambycidae (Insecta, Coleoptera) from central Bahia State (Brazil) with description of two new species and new geographic records. Zootaxa 4109(5): 555–568.
- Nascimento FEL, Bravo F. 2014.** Espécies de Cerambycidae (Coleoptera) coletadas nas expedições do PPBIO Semiárido, p. 127–138. In: Bravo, F. and Calor, A. (org.), Artrópodes do Semiárido: biodiversidade e conservação. Printmídia; Feira de Santana. 296 p.
- Nascimento FEL, Silva Ferreira A, Bravo FB. 2017.** Cerambycidae (Coleoptera) do Semiárido: Ampliando o conhecimento, p. 76–98. In: Bravo F. (ed.). Artrópodes do Semiárido II: biodiversidade e conservação. Métis Produção Editorial; São Paulo. 139 p.
- Noguera FA, Ortega-Huerta MA, Zaragoza-Caballero S, González-Soriano E, Ramírez-García E. 2017.** Species richness and abundance of Cerambycidae (Coleoptera) in Huatulco, Oaxaca, Mexico; relationships with phenological changes in the Tropical Dry Forest. Neotropical Entomology 47(4): 457–469.
- Olivier AG. 1790.** Encyclopédie méthodique, ou par ordre de matières; par une société de gens de lettres, de savans et d'artistes; précédée d'un vocabulaire universel, servant de table pour tout l'ouvrage, ornée des portraits de Mm. Diderot & d'Alembert, premiers éditeurs de l'Encyclopédie. Histoire naturelle. Insectes. Volume 5(1). Panckoucke Libr.; Paris. 368 p.
- Olivier AG. 1795.** Entomologie, ou histoire naturelle des insectes, avec leurs caractères généraux et spécifiques, leur description, leur synonymie, et leur figure enluminée. Coléoptères. Volume 4. Desray; Paris. 519 p.

- Pascoe FP. 1863.** Notes on the Australian Longicornia, with descriptions of sixty new species. The Transactions of the Entomological Society of London 1(3): 526–570.
- Sama G. 1991.** Note sulla nomenclatura dei Cerambycidae della regione Mediterranea. Bolletino della Società Entomologica Italiana 123(2): 121–128.
- Strauch A. 1861.** Catalogue Systématique de tous les Coléoptères décrits dans les Annales de la Société Entomologique de France depuis 1832 jusqu'à 1859. H. W. Schmidt, Libraire Éditeur; Halle. iv + 160 p.
- Swift I, Bezark LG, Nearn EH, Solís A, Hovore FT. 2010.** Checklist of the Cerambycidae (Coleoptera) of Costa Rica. Insecta Mundi 131: 1–68.
- Švácha P, Lawrence JF. 2014.** 2.4 Cerambycidae Latreille, 1802. p. 77–161. In: Leschen AB, Beutel RG. (volume eds.). Handbook of zoology, Arthropoda: Insecta; Coleoptera, beetles, Volume. 3: Morphology and systematics (Phytophaga). Walter de Gruyter and Co.; Berlin. xii + 675 p.
- Tavakilian GL, Chevillotte H. 2021.** Titan: base de données internationales sur les Cerambycidae ou Longicornes. Version 3.0. Available at <http://titan.gbif.fr/> (Last accessed 15 July 2021.)
- Thomson J. 1861.** Deuxième partie. p. 129–396. In: Essai d'une classification de la famille des cérambycides et matériaux pour servir à une monographie de cette famille. Bouchard-Huzard; Paris. xvi + 396 p.
- Thomson J. 1864.** Systema cerambycidarum ou exposé de tous les genres compris dans la famille des cérambycides et familles limitrophes. H. Dessain; Liège. 352 p.
- Toledo VH, Noguera FA, Chemsak JA, Hovore FT, Giesbert EF. 2002.** The Cerambycid Fauna of the tropical dry forest of “El Aguacero”, Chiapas, Mexico (Coleoptera, Cerambycidae). The Coleopterists Bulletin 56(4): 515–532.
- Touroult J, Dalens P-H, Brûlé S, Poirier E. 2010.** Inventaire des longicornes: analyse de l'efficacité des techniques de collecte en Guyane. Supplement au Bulletin de liaison d'ACOREP-France «Le Coleoptériste»: 15–33.
- Turnbow RH, Cave RD, Thomas MC. 2003.** A list of Cerambycidae of Honduras, with additions of previously unrecorded species. Ceiba 44(1): 1–43.
- Wappes JE, Morris RF, Nearn EH, Thomas MC. 2006.** Preliminary list of Bolivian Cerambycidae (Coleoptera). Insecta Mundi 20(1–2): 1–45.
- Wappes JE, Santos-Silva A, Botero JP. 2018.** Description of a new species of *Ochraethes* Chevrolat, 1860, redescription of *Plocaederus mirim* Martins and Monné, 2002, and new geographical records for *Plocaederus* Dejean, 1835 (Coleoptera, Cerambycidae, Cerambycinae). Insecta Mundi 609: 1–8.
- White A. 1853.** Catalogue of the coleopterous insects in the collection of the British Museum. Part VII. Longicornia I. British Museum; London. 174 p.
- Zajciw D. 1966.** Estudos do gênero “*Brasilianus*” Jakobson, 1924 (Col., Cerambycidae, Cerambycinae). Revista Brasileira de Biologia 26(1): 47–58.

Received August 19, 2021; accepted September 10, 2021.

Review editor Patrick Gorrington.