

INSECTA MUNDI

A Journal of World Insect Systematics

0452

A new genus of Rhinotragini for *Molorchus laticornis* Klug, 1825
(Coleoptera, Cerambycidae)

Robin O. S. Clarke
Hotel Flora and Fauna,
Casilla 2097
Santa Cruz de La Sierra, Bolivia

Amoret Spooner
Oxford University Museum of Natural History
Parks Road, Oxford, OX1 3PW, United Kingdom

Joachim Willers
Museum für Naturkunde
Invalidenstraße 43
Berlin 10115, Germany.

Date of Issue: December 4, 2015

Robin O. S. Clarke, Amoret Spooner, and Joachim Willers
A new genus of Rhinotragini for *Molorchus laticornis* Klug, 1825
(Coleoptera, Cerambycidae)
Insecta Mundi 0452: 1-6

ZooBank Registered: LSID: urn:lsid:zoobank.org:pub:8871BB35-5ACC-483D-8F24-2A5B5FC30654

Published in 2015 by

Center for Systematic Entomology, Inc.
P. O. Box 141874
Gainesville, FL 32614-1874 USA
<http://www.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, CAB Abstracts, etc. **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. Manuscript preparation guidelines are available at the CSE website.

Chief Editor: Paul E. Skelley, e-mail: insectamundi@gmail.com

Head Layout Editor: Eugenio H. Nearn

Editorial Board: J. H. Frank, M. J. Paulsen, Michael C. Thomas

Review Editors: Listed on the *Insecta Mundi* webpage

Manuscript Preparation Guidelines and Submission Requirements available on the *Insecta Mundi* web-page at: <http://centerforsystematicentomology.org/insectamundi/>

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

CSIRO, Canberra, ACT, Australia
Museu de Zoologia, São Paulo, Brazil
Agriculture and Agrifood Canada, Ottawa, ON, Canada
The Natural History Museum, London, Great Britain
Muzeum i Instytut Zoologii PAN, Warsaw, Poland
National Taiwan University, Taipei, Taiwan
California Academy of Sciences, San Francisco, CA, USA
Florida Department of Agriculture and Consumer Services, Gainesville, FL, USA
Field Museum of Natural History, Chicago, IL, USA
National Museum of Natural History, Smithsonian Institution, Washington, DC, USA
Zoological Institute of Russian Academy of Sciences, Saint-Petersburg, Russia

Electronic copies (On-Line ISSN 1942-1354, CDROM ISSN 1942-1362) in PDF format:

Printed CD or DVD mailed to all members at end of year. 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/>

Layout Editor for this article: Michael C. Thomas

A new genus of Rhinotragini for *Molorchus laticornis* Klug, 1825
(Coleoptera, Cerambycidae)

Robin O. S. Clarke

Hotel Flora and Fauna,
Casilla 2097

Santa Cruz de La Sierra, Bolivia
hotelfandf@hotmail.com

Amoret Spooner

Oxford University Museum of Natural History
Parks Road, Oxford, OX1 3PW, United Kingdom
amoret.spooner@oum.ox.ac.uk

Joachim Willers

Museum für Naturkunde
Invalidenstraße 43
Berlin 10115, Germany.
joachim.willers@mf-n-berlin.de

Abstract. *Klugiatragus* gen. nov. is described for *Epimelitta laticornis* (Klug, 1825) because this species has closed procoxal cavities, a crucial diagnostic incompatible with *Epimelitta* Bates, 1870, which has open procoxal cavities. Both sexes of this species are illustrated.

Key words. Cerambycinae; New combination; Taxonomy.

Introduction

This paper, as part of an ongoing revision of the genus *Epimelitta* Bates, 1870, examines the taxonomic status of *Epimelitta laticornis* (Klug, 1825) from Brazil. This species has closed procoxal cavities, excluding it from *Epimelitta*, which is characterized as having open procoxal cavities.

Klug (1825) described a single female specimen from Brazil (collected by Dr. de Olfers et Sellow) as *Molorchus laticornis*. Newman (1841) described a single male specimen from near Rio de Janeiro, Brazil, as *Charis melete*. White (1855) transferred *Molorchus laticornis*, with some hesitation (thus the interrogative), to the genus *Charis* (?).

Bates (1873) transferred *Charis laticornis* to a new species group in the genus *Tomopterus*, even though, as he says [author's paraphrased version] "... the resemblance of this species to the typical ones of the genus *Tomopterus* is very great, but it differs in the elytra being a little prolonged, narrowed and rounded at the tips, and by its antennae." His error was to bequeath a cascade of further errors as evidenced by the references that follow. Bates (*op. cit.*) maintained Newman's *Charis melete* in its genus; but added the following comment. "The description [of *C. melete*] in some respects applies to *Tomopterus laticornis* (Klug), but it is not sufficiently complete to enable one to decide."

Aurivillius (1912) transferred *Charisia melete* to the genus *Epimelitta*; *Charisia* having replaced *Charis* Newman, 1840 since *Charis* Hübner, 1816 was already in use for a genus of butterflies, as pointed out by G. C. Champion in Bates (1892).

Zajciw (1975), in his revision of the genus *Tomopterus*, provided a redescription and a figure of the elytra of what he referred to as a male *Tomopterus laticornis* (Klug). However, the description would seem to be, and the figure of the scutellum and elytra clearly is, that of a *Tomopterus*, and certainly not that of Klug's species.

Monné and Giesbert (1992) seem to have overlooked Zajciw's discrepancy and transferred *Tomopterus laticornis* (Klug) to the genus *Epimelitta*. They correctly synonymised Newman's *Charis melete* with Klug's species. Magno (1995) made no mention of Zajciw's *Tomopterus laticornis*.

Material and methods

Measurements were made using a cross-piece micrometer disc, 5mm x 0.1mm. Total length = tip of mandibles to apex of abdomen. Forebody length (estimated with head straight, not deflexed) = apex of gena to middle of posterior margin of metasternum. Length of abdomen = base of urosternite I (apex of abdominal process) to apex of urosternite V. Length of rostrum = genal length (from apex of side to where it meets inferior lobe of eye). Length of inferior lobe of eye (viewed from above with the scale along side of gena), from the most forward position to the hind margin of the lobe (adjacent to, and slightly to the side of, antennal insertion). Width of inferior lobe of eye (with head horizontal and level viewed from directly above) = width of head with eyes at its widest point, minus width of interocular space, and divided by two. Interocular space between inferior lobes = its width at the narrowest point (including smooth lateral margins). References to antennal length in relation to body parts are made, as far as is possible, with head planar to dorsad and antenna straightened. Length of leg (does not include coxa) = length of femur (from base of femoral peduncle to apex of claw) + length of tibia + length of tarsus (does not include claws).

One character commonly used in descriptions of Rhinotragini is the point at which the prothorax is widest. In an attempt to reduce inconsistency of this character, the — “prothoracic quotient” — is the result of dividing the length of the prothorax by the distance from the front border to its widest point, as explained in Clarke (2015).

The acronyms used in the text are as follows:

OXUM — Hope Entomological Collections, University Museum, Oxford, United Kingdom.

STRI — Smithsonian Tropical Research Institute, Panama City, Panama.

ZMHB — Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.

Taxonomy

Klugiatragus gen. nov.

(Fig. 1-4)

Type species *Molorchus laticornis* Klug, 1825, designated by monotypy.

Description. Medium-sized species, moderately elongate. Forebody distinctly shorter than abdomen. **Head** with rostrum moderately long in female, shorter in male. Labrum transverse, subrectangular, about three times wider than long. Clypeus almost planar with frons, apex as wide as labrum. Apical palpomeres of maxilla and labium fusiform, truncate at apex, those of labium larger. Galea long and narrow. Inferior lobes of eyes large and convex; in male almost contiguous (interocular distance about five times narrower than width of one lobe); in female well separated (but interocular distance less than width of one lobe). Superior lobes of eyes almost parallel-sided, weakly narrowed laterally, and well separated. Antennal tubercles well-separated, weakly raised, but somewhat acute at apex. **Antennae** slightly longer than forebody; scape subpyriform (viewed laterally); antennomeres III and IV filiform; III longer than scape, and distinctly longer than any other segment; IV and V subfiliform (slightly widened at apex); VI-XI forming substantial, flattened, serrate, apical club; VI narrow at base, strongly widening to apex; VII triangular, wider than VI, at apex as wide as VIII-X; VIII-X transverse (about twice as wide as long) and trapezoidal; XI rounded, narrower than VII-X and short. **Prothorax** slightly elongate in both sexes; cylindrical, with regularly and moderately rounded sides (these widest at middle); base hardly juxtaposed between elytral humeri. Pronotum moderately convex, surface of disc almost regular (laterally with nearly obsolete arc of paired calli); apical constriction absent, basal constriction weakly abrupt, relatively narrow, and not fossate. **Prosternum** flat and planar with its process. Prosternal process flat; base rather wide (more so in female); apex moderately large, trapezoidal in male, subtriangular in female. Procoxal cavity plugged laterally and closed behind. **Scutellum** small and rounded at apex. **Elytra** cuneate; rather flat and short (but distinctly longer than width of humeri); apex just passing metacoxae; apical half moderately gaping. Humeri not hiding mesepimerum. Each elytron narrowed to rounded, almost unarmed apex; middle half with narrow, translucent panel, these depressed (more so apically).

Mesosternum abruptly and deeply inclined to mesosternal process; base of process wide and tumid at midline; apex of process somewhat unusual, rounded and divergent laterally, apically truncate, and pre-apex without tooth. Mesoxal cavity moderately widely open to mesepimerum. Lengths of mesosternum/metasternum about 0.63 in male, 0.66 in female. **Metathorax** with almost straight, parallel sides, hind margin obliquely rounded to middle of metasternal apex; metasternum moderately tumid and convex (less so in female), more prominent than mesocoxae in male, planar with mesocoxae in female. Metepisternum moderately wide and parallel-sided for basal two-thirds, subacuminate towards apex. **Abdomen** fusiform in female, cylindrical in male; in both sexes rather strongly convex, narrow, moderately annulated, and urosternite V well differentiated for apical half. Abdominal process inclined to abdomen in male, planar with abdomen in female. **Legs** (in female); ratio lengths front/middle/hind leg 1.0:1.2:2.1; front and middle legs moderately long, hind leg relatively short (body length/length of legs about 2.8, 2.3, 1.3 respectively). In both sexes femora pedunculate-clavate; claws not robust; mesofemur distinctly longer than mesotibia; metafemur subcylindrical, clava fusiform; apex nearly reaching apex of urosternite III; metatibia lacking brushes; on metatarsis, tarsomere I slightly shorter than length of II and III together.

Diagnosis. The large, flat, compact antennal club, comprising segments VI-XI, may be unique among the Rhinotragini. The antennae of *Tomopterus exilis* Chemsak & Linsley, 1979 are somewhat similar (but not flattened), and the genus, itself, characterized by rounded, exceptionally short elytra (usually shorter than width across humeri); those of *Klugiatragus* not rounded (but cuneate), and about 1.5 times longer than width across humeri. Two other Rhinotragini genera are characterized by large, compact antennal clubs (but segments rounded and not flattened); *Antennommata* Clarke, 2010 with 4-segmented club, and *Caprichasia* Clarke, 2012 with 2-segmented club; and neither of these genera have short cuneate elytra.

Etymology. The genus name, *Klugiatragus*, seems appropriate as Klug described the type species of this rhinotragid. The genus is male.

***Klugiatragus laticornis* (Klug, 1825) comb. nov.**

(Fig. 1-4)

Redescription of the female holotype. Total length 11.6 mm; rather narrow (total length/width metathorax 5.4). Lengths of forebody/abdomen 0.80. **Color.** Head black (labrum and base of mandibles chestnut); prothorax dark chestnut above, paler below; meso- and metasternum, and elytra chestnut (metepisternum, humeri and area adjacent to scutellum darker, and translucent panels of elytra weakly vitrified); abdomen pale chestnut (apical urosternite darker chestnut). Antennae chestnut, becoming paler towards apex. Legs becoming darker towards apex; pro- and mesofemora orange; metafemora chestnut, peduncle yellowish; tibia and tarsi darker chestnut.

Surface ornamentation. Compared to most epimelittids pubescence much reduced. Notable pubescence on dorsad reduced to moderately dense, recumbent fascia (the hairs short and snow-white in color), as follows. On pronotum narrow, well-delimited, single arc from sides of apical constriction to near middle of basal constriction (by way of extreme lateral margins of pronotum), and a short, transverse fascia joining this arc at its middle; covering scutellum, and adjacent to it, with sparser hairs on base of elytra. Notable pubescence on underside as follows. On mesepimeron and adjacent margin of mesosternum; broad arc covering base of metasternum, apex of metepisternum and metacoxae; on abdomen clothing latero-basal margins of urosternites I-III. Appendages lacking notable pubescence. Antennae clothed with indistinct, fine, white pubescence. Femora and ventral surface of metatibia with moderately dense, very short, erect, dusky setae; and mesal surface of metatibia with long, whitish hairs (but far too short and sparse to be called brushes).

Puncturation of body generally very dense, rather small, and alveolate. On dorsad head only slightly sparser (and non-alveolate on frons); on pronotum uniformly distributed (without impunctate areas); and on apex of translucent panels of elytra sparser. On underside punctures of prosternum becoming confluent and somewhat rugose; on mesosternum small and embedded in matrix of microsculpture; on

metasternum simple, shallower and beveled; on abdomen subcontiguous near midline, becoming confluent and strongly beveled towards sides.

Structure. Head Head with moderately long rostrum (width/length 2.56). Width of one inferior lobe of eyes/interocular distance 1.22. Superior lobes of eyes with about 10-11 rows of moderately large ommatidia, laterally narrowed by about one third their mesal width; and separated by three times the width of one lobe. Antennal tubercles separated by 3.4 width of scape. **Antennae** reaching middle of urosternite I. Length of scape 0.75 mm; III (0.90 mm) 1.20 longer than scape; IV (0.65 mm); V (0.75 mm); VI (0.70 mm); VII (0.6 mm); VIII and IX (0.55 mm); X (0.50 mm); XI (0.55 mm) with small, acute apical cone. **Prothorax** 1.08 longer than wide; basal angles rounded (but not strongly), leaving width of base hardly wider than apex (widths apex/base 0.91); base almost straight; prothoracic quotient 2.00. Base of prosternal process 3.14 narrower than width of procoxal cavity. **Elytra** slightly depressed across apical third; 1.38 longer than width of humeri; laterally slightly arched and not divergent apically. Humeri moderately projecting and prominent. Each elytron gradually, but not strongly narrowed to apex (sutural angle with minute tooth); translucent panel weakly demarcated. **Mesosternum** at centre more prominent than sides; mesocoxal cavity 1.38 wider than base of process. **Abdomen** widest towards apex of urosternite II. Urosternites sequentially shorter towards apex of abdomen; I, III and IV trapezoidal; I slightly elongate with well rounded hind angles; II cylindrical; II-IV moderately transverse. Urosternite V moderately elongate, subconical; sides weakly constricted across apical third, the latter not down-turned; apical margin truncate, and minutely angled at sides; with well demarcated soleate depression, trapezoidal in shape, moderately deeply depressed (leaving margins rather abrupt and narrow). **Front leg** femur slightly longer than tibia; tibia moderately slender, narrow at base, gradually widening to apex, apical margin oblique, not lanceolate, apico-lateral angle without setose tubercle. **Middle leg** femur 1.5 longer than length of tibia; length of femur/lateral width of femoral clava 5.0; tibia rather slender, gradually widening to apex. **Hind leg** rather slender; clava moderately long (lengths clava/peduncle about 2.1); peduncle relatively short, narrow, and flattened on dorsal and lateral surfaces. Metatibiae almost straight (or bisinuate when viewed laterally) and hardly widening from base to pre-apex. Metatarsus distinctly narrower than apex of metatibia. Metatarsomere I cylindrical, 0.91 length of II + III; II not pediculate, slightly elongate, somewhat trapezoidal; III shorter than II, the lobes narrow, hardly rounded at sides, and weakly divergent.

Redescription of male holotype. Except for sexually dimorphic characters (already referred to in the description of the genus) and color (generally darker), essentially similar to female. **Color.** Body almost entirely black (mouthparts and abdominal process yellowish); elytra black with pale chestnut translucent panels. Antennae chestnut, becoming blacker towards apex. Legs considerably darker than female; profemora chestnut at sides, dark chestnut dorsally; mesofemora chestnut with narrow black fascia dorsally, peduncle paler; metafemora as female; tibiae and tarsi black. **Structure.** Forebody 0.72 length of abdomen. Width/length of rostrum 3.50. Width of one inferior lobe of eyes/interocular distance 5.2. Superior lobes of eyes separated by 2.5 times the width of one lobe. Prothorax 1.06 longer than wide. Elytra 1.44 longer than width of humeri.

Genus *Klugiatragus* species sample data

Klugiatragus laticornis (Klug, 1825) comb. nov.

(Fig. 1-4)

Molorchus laticornis Klug, 1825: 469, pl. 44, fig. 1.

Charis ? *laticornis*; White, 1855: 179.

Tomopterus laticornis; Bates, 1873: 129.

Epimelitta laticornis; Monné, M. A. & Giesbert, 1992: 250 (syn.); Monné, M. A. 2015: 741 (cat.).

Charis melete Newman, 1841: 91; White, 1855: 178.

Epimelitta melete; Aurivillius, 1912: 284 (cat.).

Measurements (mm). Male/female, total length 11.43/11.60; length of pronotum 1.92/2.00, width of pronotum 1.81/1.85, length of elytra 2.66/2.75, width at humeri 1.85/2.00.

Specimen analyzed. Holotype of *Molorchus laticornis*, BRAZIL, female, Dr. de Olfers et Sellow col. (ZMHB); holotype of *Charis melete*. BRAZIL, *Rio de Janeiro*, near Rio, male, Mr. Miers col. (OXUM).

Acknowledgments

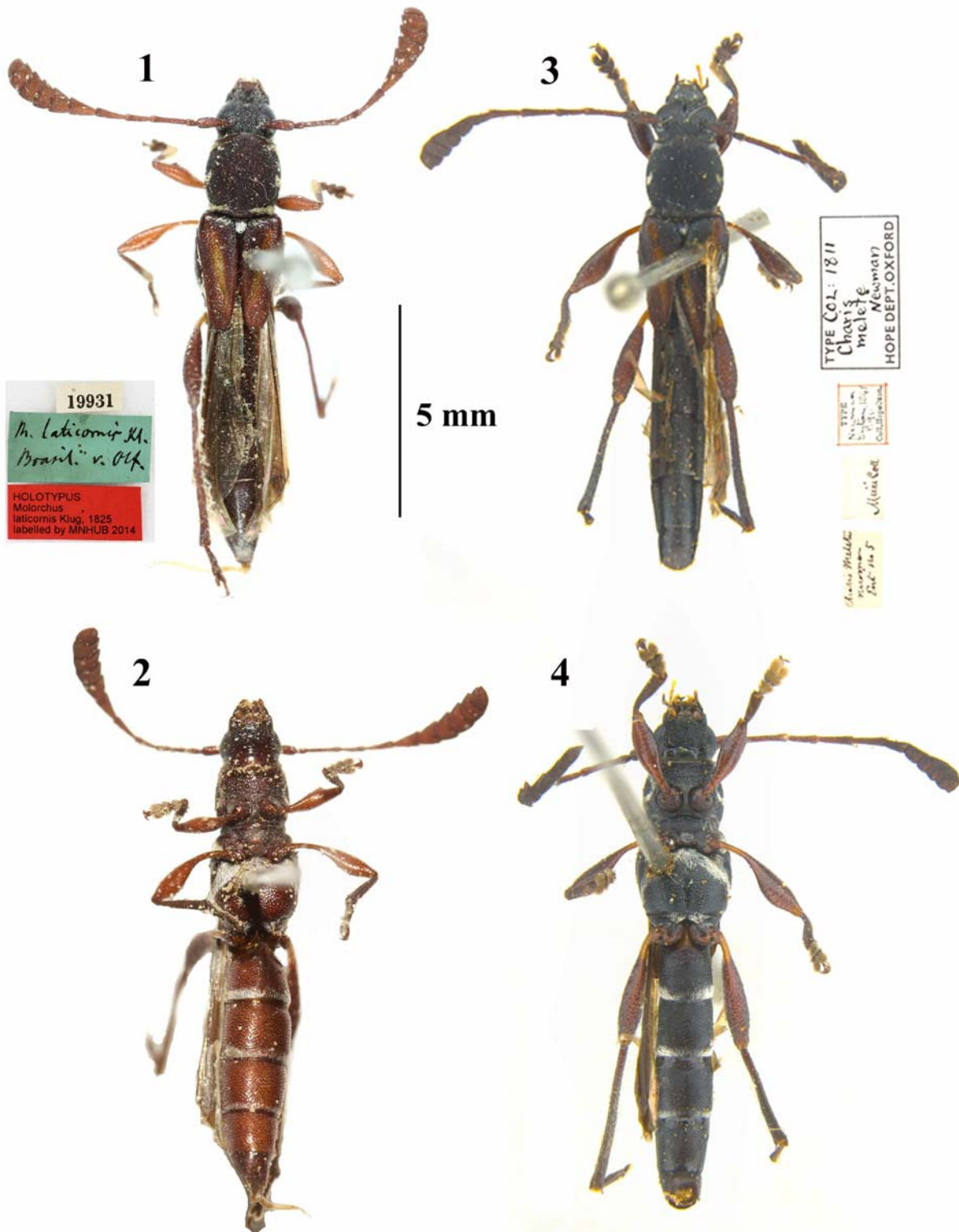
We thank the late Dr. Ubirajara Martins for his steady encouragement and help. Very special thanks to the following: Dr. J. Frisch (ZMHB) for arranging the loan of Klug's holotype, and to Dr. Donald Windsor (STRI) for transporting it; and Katherine Child (OXUM) for the excellent photographs of Newman's type. We are also much indebted to the reviewers (James Wappes and Antonio Santos-Silva) and the editors (Michael Thomas and David Plotkin) for devoting considerable time to revising and greatly improving the draft of this manuscript.

Literature Cited

- Aurivillius, C. 1912.** Coleopterorum Catalogus, pars 39, Cerambycidae: Cerambycinae. Berlin, W. Junk, 574 p.
- Bates, H. W. 1873.** Notes on the Longicorn Coleoptera of Tropical America. The Annals and Magazine of Natural History, (4)11: 21-45.
- Bates, H. W. 1892.** Additions to the Longicornia of Mexico and Central America, with remarks on some of the previously recorded species. Transactions of the Entomological Society of London, 1892: 143-183.
- Clarke, R. O. S. 2015.** Revision of the genus *Acyphoderes* Audinet-Serville, 1833, with a brief synopsis of the genus *Bromiades* Thomson, 1864 (Coleoptera, Cerambycidae). Insecta Mundi, 041: 1-92.
- Klug, F. 1825.** Entomologiae Brasiliae specimen alterum, sistens insectorum coleopterorum nondum descriptorum centuriam. Nova Acta Physico-Medica Academiae Caesareae-Leopoldino-Carolinae, Naturae Curiosorum, 12(2): 421-476.
- Magno, P. R. 1995.** Gênero *Tomopterus* Audinet-Serville, 1833 (Coleoptera, Cerambycidae, Cerambycinae, Rhinotragini): descrições, chave para as espécies e nova combinação. Revista Brasileira de Entomologia, 39(3): 553-566.
- Monné, M. A. 2015.** Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part I. Subfamily Cerambycinae. Available from http://www.cerambyxcat.com/Parte1_Cerambycinae.pdf.
- Monné, M. A. & E.F. Giesbert. 1992.** Nomenclatural notes on Western Hemisphere Cerambycidae (Coleoptera). Insecta Mundi, 6(2): 249-255.
- Newman, E. 1841.** Entomological notes. The Entomologist, 1(6): 90-95.
- White, A. 1855.** Catalogue of the coleopterous insects in the collection of the British Museum, Longicornia 2. London, 8: 175-412.
- Zajciw, D. 1975.** Revisão monográfica do gênero *Tomopterus* Audinet-Serville, 1833 (Coleoptera, Cerambycidae, Rhinotragini). Studia Entomologica, 18(1-4): 569-604.

Received September 7, 2015; Accepted November 7, 2015.

Review Editor Michael Thomas.



Figures 1-4. Fig. 1-2. *Molorchus laticornis* Klug, 1825, female holotype. 1) dorsal aspect. 2) ventral aspect. Fig. 3-4. *Charis melete* Newman, 1841, male holotype: 3) dorsal aspect. 4) ventral aspect.