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Redescription and Lectotype Designation for *Emphania chloris* BURMEISTER, 1855 and *Heptomera metallica* BLANCHARD, 1850

(Coleoptera, Scarabaeidae, Sericini)

With 3 figures

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Summary

Lectotypes for *Emphania chloris* BURMEISTER, 1855 and *Heptomera metallica* BLANCHARD, 1850 which are regarded as synonymous are designated. The lectotype of *H. metallica* is redescribed and its aedeagus is figured.

Zusammenfassung

Die Lectotypen von *Emphania chloris* BURMEISTER, 1855 und *Heptomera metallica* BLANCHARD, 1850 werden designiert und beschrieben. Die beiden Taxa sind synonym. Der Lectotypus von *Heptomera metallica* wird beschrieben und dessen Aedoeagus abgebildet.

Key words

Nomenclature; taxonomy; Insecta; Coleoptera; Scarabaeidae; *Emphania*, *Heptomera*; *Emphania chloris*, *Heptomera metallica*.

Introduction

One of the first genera established for the very diverse but poorly known Malagasy fauna of Sericini was *Emphania* ERICHSON, 1847. The genus presently includes only three species, however its taxonomic status needs to be revised since no type species has ever been designated. In conjunction with a proposal for type species designation presented to the International Commission of Zoological Nomenclature (AHRENS in press), lectotypes for *Heptomera metallica* BLANCHARD, 1850 and *Emphania chloris* BURMEISTER, 1855 are designated. Since BRENSKE (1899), both nominal taxa are regarded to be synonymous. The lectotype of *H. metallica* is redescribed in the present paper.

Depositories

MLUH	Martin-Luther-Universität, Wissenschaftsbereich Zoologie, Halle/Saale
MNHN	Museum national d'Histoire naturelle, Paris
ZMHB	Zoologisches Museum der Humboldt-Universität, Berlin

Nomenclature

The genus *Emphania* ERICHSON, 1847 (p. 695) was established without any included nominal species, with a short but significant morphological description and distributional data (Madagascar). BLANCHARD (1850) was the first author to subsequently use the name *Emphania* with reference to ERICHSON (1847). He included 17 new species in the genus, which was considered a “divisio” within the genus *Omaloplia*. The original specimens (specimens of collection Klug placed with Erichson’s hand written label with “*Emphania*” dating back before 1847, one of them laterly transferred to coll. Burmeister), on which Erichson’s description was based, were later studied and described as a new species (*Emphania chloris*) by BURMEISTER (1855, p. 150). BRENSKE (1899, p. 238), synonymized *Emphania chloris* with *Heptomera metallica* BLANCHARD, 1850 (p. 89), a species on the base of which BLANCHARD (1850) erected the monospecific genus *Heptomera*. BRENSKE (1899) considered the genus *Emphania* to be monospecific. Since that time, the name *Emphania* has been defined in the sense of BURMEISTER and BRENSKE. However, no type species was ever designated. Additionally, no taxon originally included by BLANCHARD in *Emphania* fit the original description offered by ERICHSON (1847, p. 695): “[translated from German]... *Pleophylla* m., *Emphania* m. (in both the metasternum produces a robust anteriorly protruding process; in the first, from the “Kaffernländern” [old term for territories of Bantu people in Southeast Africa], the antennal club has six joints, in the second from Madagascar the antennal club has three joints)...”. The name *Emphania* ERICHSON would need to be redefined if any of the nominal species included by Blanchard subsequently would be selected as the type species. A type species designation of any of the species named by BLANCHARD under *Emphania* would affect the synonymy of five additional generic names: *Comaserica* BRENSKE, 1897; *Hyposerica* BRENSKE, 1897; *Maladera* MULSANT and REY, 1871; *Neuroserica* BRENSKE, 1900; and *Tamnosericca* BRENSKE, 1899. These genera were used by BRENSKE (1897, 1900) for the 17 species described under “*Emphania*” by BLANCHARD (1850). All of these nominal genera have been used as valid names since they were erected. However, for three of these genera, a type species has not yet been designated. In order to conserve the taxonomic identity and the prevailing usage of *Emphania* as well as to retain the status of the five other genera affected by the type species designation of *Emphania* (possible subjective or objective synonymy with *Comaserica*, *Hyposerica*, *Maladera*, *Neuroserica*, and *Tamnosericca*), I have proposed to override Article 67.2.2. (ICZN 1999) and to designate *Heptomera metallica* BLANCHARD, 1850 as the type species of *Emphania* (AHRENS in press).

Emphania metallica (BLANCHARD, 1850)

Heptomera metallica BLANCHARD, 1850: 89; BRENSKE 1899: 238.

Emphania chloris BURMEISTER, 1855: 180; BRENSKE 1899: 238.

Type material examined. Lectotype (*Heptomera metallica* Blanchard, 1850): ♂ “*H. metallica* Cat. Mus. Madagascar [blue label] / Museum Paris” (MNHN). Paralectotype: 1 ♀ “Muséum Paris Madagascar Goudot [blue label] / 477 34” (MNHN). Lectotype (*Emphania chloris* Burmeister, 1855): ♀ “24966 / *chloris* N. Madag. Goud. [blue label]” (ZMHB). Paralectotypes: 1 ♀ “24966” (ZMHB), 1 ♀ “MLU Halle WB Zoologie S.-Nr. 8/3/12 [white label] / *chloris* Kl. Madag. MB. [blue label]” (MLUH).

Lectotype-Redescription (*Heptomera metallica*). Length: 8.0 mm, length of elytra: 5.9 mm, width: 4.8 mm. Body oval, completely shiny and glabrous, except for a few small setae on the head, dorsal surface brown with greenish sheen, ventral surface metallic-green, antenna dark brown.

Labroclypeus subtrapezoidal, little wider than long, widest at base, lateral margins unevenly convex and convergent to moderately rounded anterior angles, lateral border and ocular canthus producing an indistinct blunt angle, margins weakly reflexed, anterior margin shallowly sinuate medially; entire surface weakly convex, shiny, finely and densely punctate, with a few short erect setae anteriorly; frontoclypeal suture feebly impressed and weakly curved medially; smooth area in front of eye approximately twice as wide as long; ocular canthus short and sharply pointed, finely and sparsely punctate, with a short single terminal seta. Frons with fine, moderately dense punctures, glabrous except for a few setae beside eyes. Eyes small, ratio of diameter / interocular width: 0.6. Antenna brown, with nine antennomeres, antennomere 3-5 fused; club with three antennomeres, a little longer than the remaining antennomeres together. Mentum anteriorly elevated.

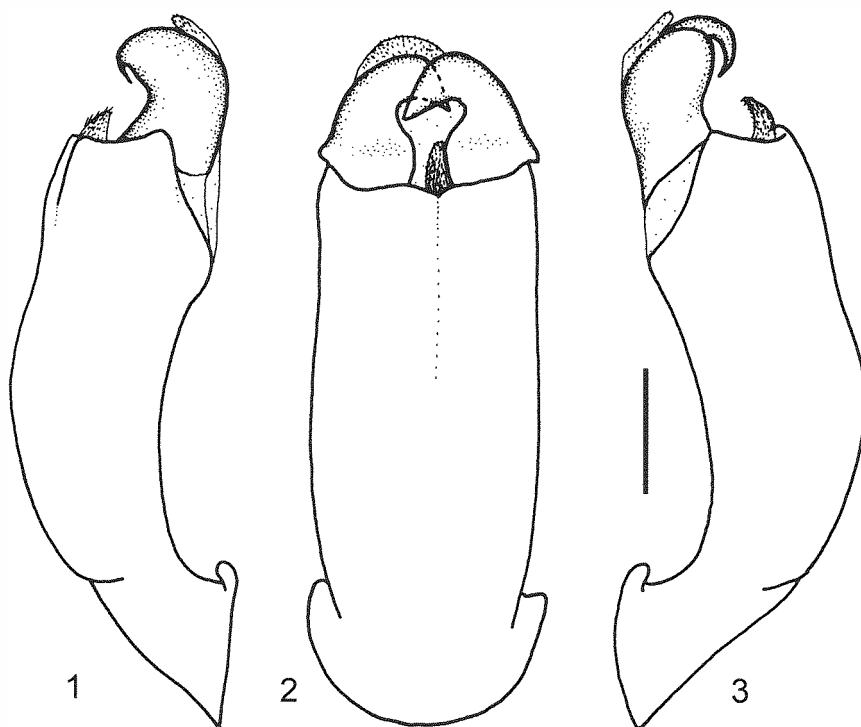
Pronotum subtrapezoidal, widest at base, lateral margins very weakly and evenly convex and strongly convergent anteriorly, anterior angles moderately produced but sharp, posterior angles blunt, anterior marginal line complete, anterior margin weakly and convexly produced medially; basal marginal line fine and widely interrupted medially; surface sparsely and finely punctate, glabrous; anterior and lateral borders sparsely setose. Hypomeron ventrally with acute edge, which is produced ventrally. Scutellum broad, triangular, apex sharp, with fine and moderately dense punctures, glabrous.

Elytra oblong, widest at middle, apical interior angle right-angled, apical external angle blunt but moderately rounded in the tip, apical border straight, with convex semicircular declivity distinctly separated from apical portion of elytra; striae not impressed, impunctate, almost invisible, intervals flat, with fine, moderately dense punctures, glabrous; epipleural edge robust, ending at the external apical angle of elytra, epipleura sparsely setose (setae in lectotype lost), apical border chitinous, without short microtrichomes.

Ventral surface shiny, thorax and metacoxa with moderately large and moderately dense punctures, sparsely setose; metacoxa very long, glabrous except for a few long setae laterally, external angle posteriorly produced forming a sharp tooth, lateral marginal line in posterior half slightly reflexed; mesal process of metacoxa slender and protruding the posterior margin of metacoxa, its ventral surface longitudinally convex. Metasternum produced anteriorly, between mesocoxae 1.5 times as wide as mesofemur, mesosternum protruding anteriorly forming a small mesosternal process. Ratio of length of metepisternum / metacoxa: 1/2.0. Each abdominal sternite, in addition to generally distributed fine and moderately dense punctures, with a distinct transverse row of coarse punctures each bearing a short, robust seta, penultimate sternite apically with a shiny smooth chitinous border, which

is one fourth as long as sternite. Pygidium weakly convex, finely and sparsely punctate, without smooth midline, punctures without microscopic setae, apex with a few long setae. Legs moderately broad; femora with two longitudinal rows of setae, finely and densely punctate; anterior edge of metafemur acute, lacking an adjacent serrated line, posterior ventral margin weakly convex medially, weakly widened in apical half and not serrate, posterior margin dorsally not serrated, finely setose. Metatibia moderately broad and long, widest at apex, ratio width / length: 1/3.4, longitudinally convex dorsally, with two groups of spines, basal one at one third, apical one at two thirds of metatibial length; lateral face longitudinally convex, with dense and fine longitudinally impressed punctures, glabrous; ventral edge not serrate, with five strong spines equidistant from each other, medial face not punctate, apex interiorly near tarsal articulation sharply truncate with an angle of approximately 45°. Tarsomeres smooth dorsally, ventrally with sparse, short setae; metatarsal segments ventrally with a strongly serrated ridge, beside which is a strong longitudinal carina, first metatarsomere a little shorter than the two following segments combined and a little longer than the upper tibial spur. Protibia short, bidentate. All claws symmetrical, feebly curved and long, with weakly truncate basal tooth.

Aedeagus: Figs 1-3.



Figures 1-3. *Emphania metallica* (BLANCHARD, 1850) (Lectotype (*Heptomera metallica* BLANCHARD, 1850): ♂ “*H. metallica* Cat. Mus. Madagascar/ Museum Paris” (MNHN).); **1, 3** - aedeagus, lateral view, **2** - aedeagus, dorsal view. Scale: 0,5 mm.

Remarks. Since the original descriptions of *Heptomera metallica* and *Emphania chloris* gave no information about the number of specimens on which the descriptions were based, it is necessary to fix the taxonomic status of both names by designating lectotypes. The respective lectotypes selected here represent the only remaining syntypes of each taxon occurring in the collection of ZMHB and MNHN, respectively. The lectotypes of the two taxa are virtually identical in most external features, consequently I consider them, in agreement with BRENSKE (1899), to be synonymous. Both lectotypes differ significantly in external morphology (punctuation of elytra, shape of head, shape of metatibia, etc.) from the remaining taxa hitherto described as *Emphania* (see MOSER 1911).

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