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Taxonomic placement and nomenclatural revisions
for five species of Neotropical Buprestidae (Coleoptera)

Norman E. Woodley

Research Collaborator, Department of Entomology
Smithsonian Institution
c/o 8920 S. Bryerly Ct.
Hereford, AZ 85615

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Taxonomic placement and nomenclatural revisions for five species of Neotropical Buprestidae (Coleoptera)

Norman E. Woodley

Research Collaborator, Department of Entomology
Smithsonian Institution
c/o 8920 S. Bryerly Ct.
Hereford, AZ 85615
normwoodley@gmail.com

Abstract. *Autarcontes lopezi* Fisher, 1925 (Coleoptera: Buprestidae), is transferred to the genus *Agrilus* Curtis, 1825 (**new combination**). *Colobogaster bella* Kirsch, 1873, is transferred to the genus *Chrysobothris* Eschscholtz, 1829 (**new combination**). *Ectinogonia isamarae* Moore, 1994, is **resurrected** as the valid name for the species previously called *E. obscuripennis* Cobos, 1954, as the latter is unavailable as infrasubspecific. *Conognatha jakobsoni* Obenberger, 1928, is **resurrected** over *C. germani* Théry in Hoscheck, 1934, as the former name has priority. *Callimicra lucida* Waterhouse, 1889, is **resurrected** as the valid name over *C. hoscheeki* Obenberger, 1922, which has been used due to several historical errors and misinterpretations.

Key words. *Agrilus*, *Chrysobothris*, *Conognatha*, *Ectinogonia*, *Callimicra*, Neotropics, taxonomy, nomenclature.

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Introduction

The large family Buprestidae contains 14,992 species as of 2020 (Bellamy 2023), but now contains several hundred more described species, especially in the genus *Agrilus* Curtis (e.g., Jendek 2021). Many species of buprestids are poorly known, especially in the Neotropics. Very few comprehensive studies are available, making identifications virtually impossible without study of important historical type material, much of which is in European museums. My recent examination of some type material has led to the discovery that two species are currently placed in incorrect genera. This is rectified and discussed below. In addition, review of historical buprestid literature has revealed some nomenclatural problems that are rectified here.

Materials and Methods

Specimens were examined using a Zeiss Stemi SV-11 stereomicroscope. Images were taken using a Macropod Pro photomacrography system (Macroscopic Solutions, LLC). The following museum acronyms are used in the text:

SMTD Senckenberg Museum für Tierkunde, Dresden, Germany

USNM Department of Entomology, Smithsonian Institution, Washington, DC, USA

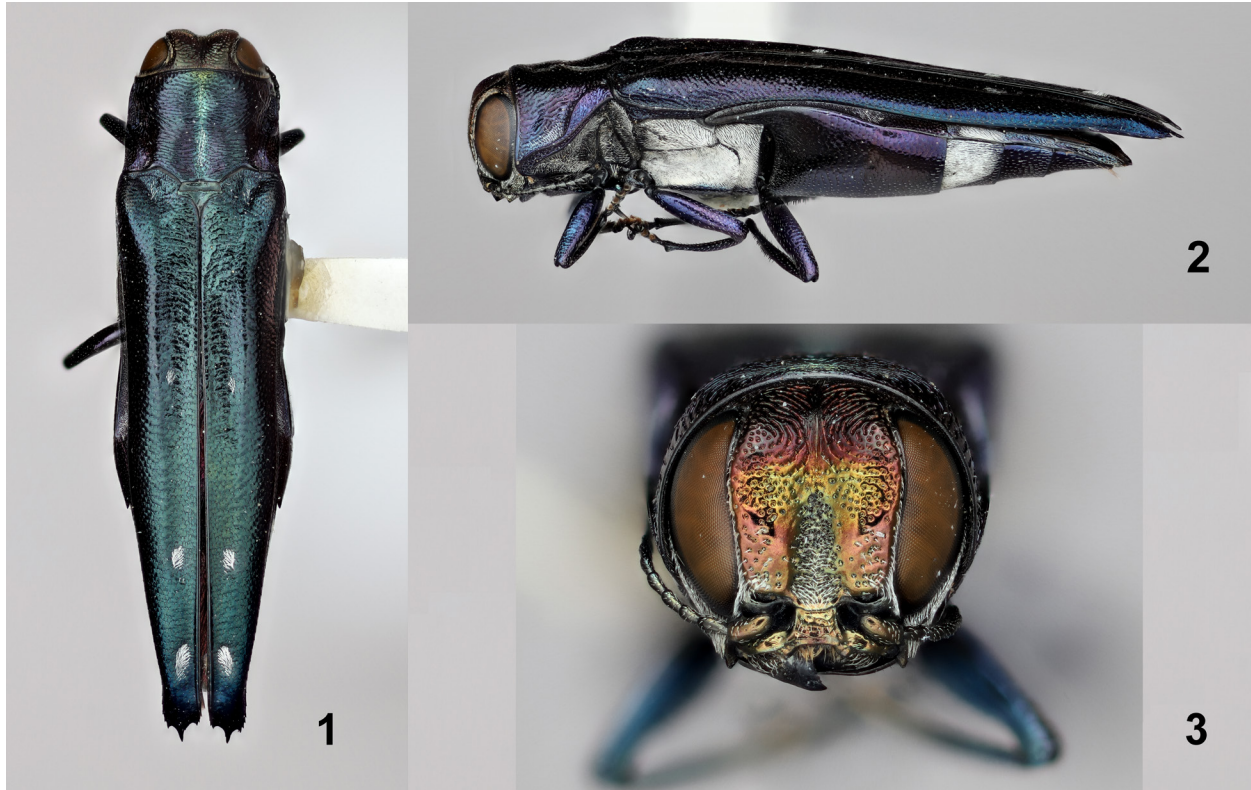
Results

Agrilus lopezi (Fisher), new combination

(Fig. 1–3)

Autarcontes lopezi Fisher 1925: 10. Type locality: Bolivia, Beni Department, Reyes. Holotype: USNM.

It is unclear why Fisher placed this species in *Autarcontes* Waterhouse, 1887, as he did not explain his reasoning. The species was still included in *Autarcontes* by Bellamy (2008c: 2375). Although Neotropical *Agrilus* species show a wide range of morphological diversity, *A. lopezi* is a fairly typical looking species. Species of *Autarcontes* have a very different appearance, having bulkier, wider proportions; the pronotum with the prehumeral carina formed as a wide, rounded ridge (at least in the type species, *A. mucoreus* (Klug, 1825)); the elytra with a variegated



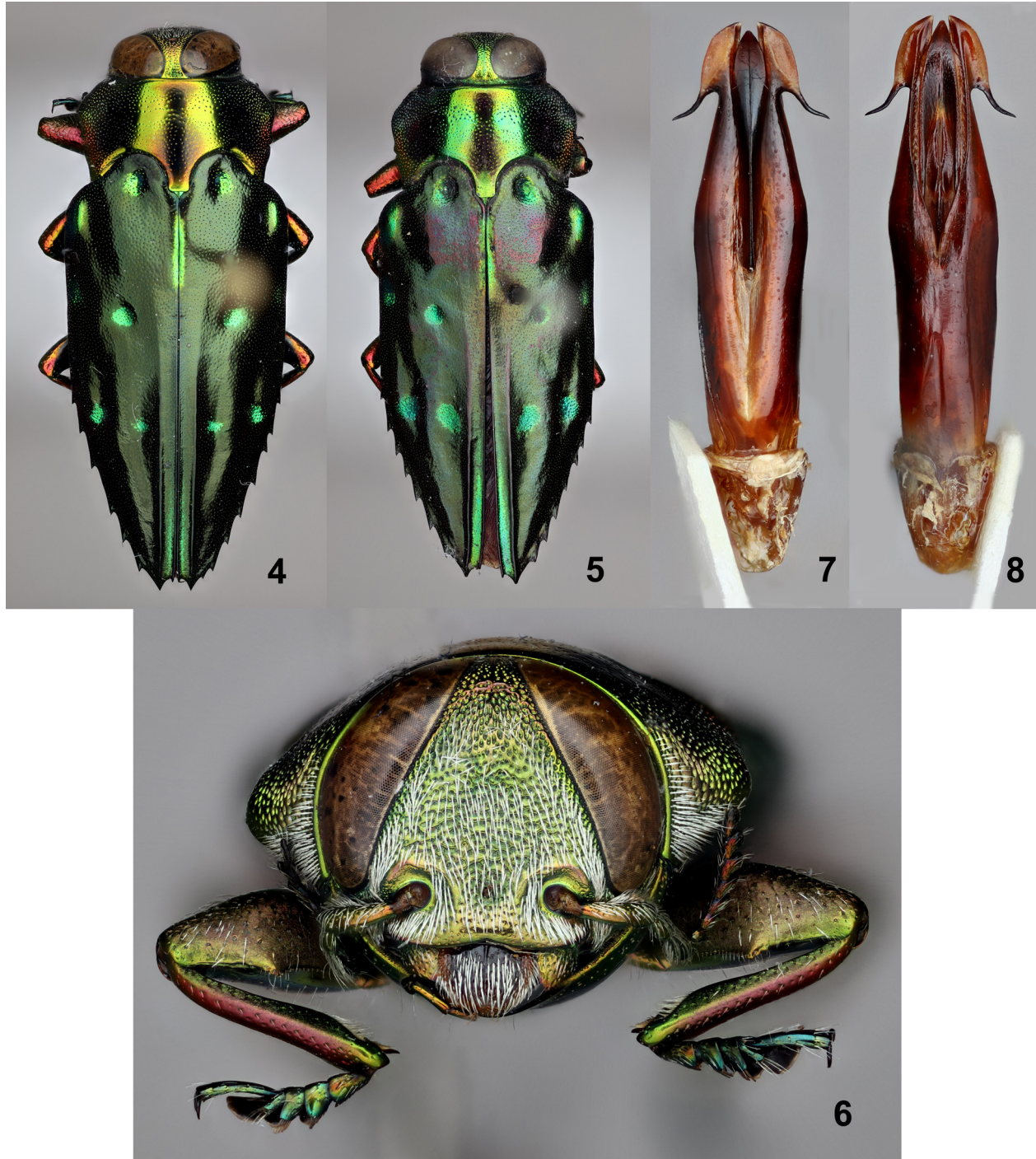
Figures 1–3. Views of holotype of *Agrilus lopezi* (Fisher). **1)** Dorsal habitus. Length = 11.5 mm. **2)** Lateral habitus. **3)** Anterior view of head.

pattern of whitish pubescence, often with a broad band in the apical third; and the elytral apices truncate to rounded, without strong spines. *Agrilus lopezi* has a slender appearance, the prehumeral carina of the pronotum well developed and sharp, and the elytral apices with a strongly developed medial spines.

***Chrysobothris bella* (Kirsch), new combination**
(Fig. 4–8)

Colobogaster bella Kirsch 1873: 348. Type locality: Peru, Pasco Region, Oxapampa Province, Pozuzu. Syntype: SMTD.

Kirsch (1873) described *Colobogaster bella*, probably from a single specimen, and compared it to his *C. erythrogonia* (Kirsch 1866: 176) described from Bogotá, Colombia. Bellamy (2008b: 1628) placed the latter in *Chrysobothris* Eschscholtz, 1829, but somehow *C. bella* has remained in *Colobogaster* Solier, 1833. Examination of the syntype indicates it should be correctly placed in *Chrysobothris*, and it belongs to a group of species that includes *C. ichthyomorpha* Thomson, 1879, and *C. thomsoni* Waterhouse, 1887. Westcott (2008) discussed and illustrated these two species as well as the similar *C. chiriquita* Obenberger, 1940. Species in this group are characterized by being fairly large *Chrysobothris* having the ventral margin of the clypeus almost straight (Fig. 6); a vaguely delimited, medial, rounded depression on the frons above the clypeus; males with very deep subapical notches on the front and middle tibiae, that on the front quite similar in form to that found on males of some species of *Buprestis* Linnaeus, 1758; and the female fifth abdominal sternite with a sharply raised medial carina. The South American species *C. viridifasciata* (Gory and Laporte, 1837), *C. rutilans* Kerremans, 1897, and *C. lucifera* Théry, 1911, appear to belong to this group. As *C. bella* was unrecognized within *Chrysobothris*, it is likely that some synonyms exist. I have seen specimens identified as *C. boliviae* Obenberger, 1924, and *C. banghaasi* Théry, 1911 (described from Peru), that are *C. bella*, so these are possible synonyms.



Figures 4–8. Views of *Chrysobothris bella* (Kirsch), male from Junin Region, Peru and male syntype. **4)** Dorsal habitus of male from Junin Region. Length = 18.0 mm. **5)** Dorsal habitus of male syntype. Length = 17.9 mm. **6)** Frontal view of male. **7)** Male genitalia, dorsal view. **8)** Male genitalia, ventral view.

Nomenclatural revisions for some Neotropical Buprestidae

Ectinogonia isamarae Moore, resurrected name

A recent paper (Anguita-Salinas et al. 2019) provided molecular evidence refining the species concepts of a few species of *Ectinogonia* Spinola, 1837. In that paper they provided evidence that the two recognized subspecies of *E. speciosa* (Germain, 1856) were not monophyletic and should be recognized as separate species. *Ectinogonia obscuripennis* Cobos, 1954, was considered to be the valid name of one of the taxa (which Anguita-Salinas et al. consistently misspelled as *E. "oscuripennis"*). However, Cobos (1954: 65) actually proposed the name *Ectinogonia buquetii speciosa* var. *obscuripennis*, because his new varietal name was proposed under the subspecies *E. b. speciosa*. Thus, even though this has been recognized as a subspecies in subsequent works as *E. speciosa obscuripennis* (e.g., Bellamy 2008a: 834) prior to the Anguita-Salinas et al. paper, the name is clearly unavailable as a quadrinomial and infrasubspecific. Therefore, *E. isamarae* Moore (1994: 159), considered a synonym of *E. obscuripennis* by Anguita-Salinas et al. (2019: 169), is the valid name for the species.

Conognatha jakobsoni Obenberger, resurrected name

Germain and Kerremans (1906) described *Pithiscus trifasciatus* from Chile, currently placed in the genus *Conognatha* Eschscholtz, 1829. When Hoscheck (1934) revised *Conognatha*, with collaboration from Théry, it was recognized that this name was a junior secondary homonym of *Buprestis trifasciata* Fabricius, 1793, itself a primary homonym of *Buprestis trifasciata* Thunberg, 1787. *Conognatha trifasciata* (Fabricius) had been used as a valid name for a species in the genus until the time of the Hoscheck monograph. The Fabrician name was placed in synonymy with *Conognatha sellovii* (Klug, 1825)(Hoscheck 1934: 287), apparently based on the fact that it was a homonym of the Thunberg name, but this wasn't discussed. Théry (in Hoscheck 1934: 189) proposed the replacement name *Conognatha germaini* for *Pithiscus trifasciatus*, even though the Hoscheck monograph listed *Conognatha jakobsoni* Obenberger, 1928, as a synonym on the same page! The few modern works (Moore and Lander 2010, Moore and Vidal 2015) treating *Conognatha* have followed the Hoscheck usage without explanation. Clearly, *C. jakobsoni* has priority and is the valid name for this taxon, and the synonymy should be as follows:

Conognatha jakobsoni Obenberger, 1928: 319.

Pithiscus trifasciatus Germain and Kerremans, 1906: 386. Preoccupied, secondary homonym of *Buprestis trifasciata* Fabricius, 1793.

Conognatha germaini Théry in Hoscheck 1934: 189. Replacement name for *Pithiscus trifasciatus* Germain and Kerremans.
Conognatha triplozonatula Obenberger, 1934: 767. Replacement name for *Pithiscus trifasciatus* Germain and Kerremans.

Callimicra lucida Waterhouse, resurrected name

The nomenclature for *Callimicra lucida* and its synonyms has had a rather tortured history. In Dejean's (1833: 83, 1836: 95) catalogs of his collection of Coleoptera, he used the generic name *Callimicra* under which he listed two species, including "Lucida. Dej. Brasilia." as well as "Venustula. Dej. Id." Neither of the species names were otherwise published, so are *nomina nuda*, and the generic name *Callimicra* Dejean is unavailable because no valid species were originally included in the publications (Bousquet and Bouchard 2013: 16). The genus *Callimicra* was subsequently described by Deyrolle (1864: 219), but only in a key with a footnote indicating the three species he included in the genus (which were *Coraebus bicolor* Gory and Laporte, 1839, *C. subcyanea* Gory, 1841, and *C. taciturna* Gory, 1841). Gemminger and Harold (1869: 1430) put *Callimicra lucida* Dejean as a synonym of *Coraebus bicolor* Gory and Laporte, in the genus *Coraebus*. They included *Callimicra* Dejean as a synonym of *Coraebus* and did not recognize *Callimicra* Deyrolle in their catalog. The type species for *Callimicra*, *Coraebus bicolor* Gory and Laporte, was subsequently designated by Cobos (1979: 425).

Waterhouse (1889: 165) described *Callimicra lucida* based on ten specimens from Bugaba, Panama (lectotype designated by Hespenheide (1979: 111), by Article 74.5 of the ICZN Code). Kerremans (1892: 300) treated *C. lucida* Waterhouse as a valid species, and treated *C. lucidula* Dejean, 1837 [=1836], as a synonym of *C. bicolor*, not associated with the Waterhouse name; this was the first misspelling of *lucida* as "*lucidula*".

Kerremans (1903: 331) listed *lucidula* Waterhouse as species number 7 under *Callimicra*, which is the first use of this incorrect spelling for the Waterhouse name. The name *bicolor* (Gory and Laporte) was listed as species

number 23, without any synonyms, as apparently synonyms were not included in the species lists in this publication. Fisher (1922: 71) treated *C. lucida* Waterhouse as a valid species, but Obenberger (1937: 1430) listed *C. lucida* Dejean and *C. lucidula* Kerremans (Kerremans 1892) in synonymy under *C. bicolor* (Gory and Laporte), and on page 1432, *C. lucidula* Waterhouse as a valid species from Panama, continuing the error of Kerremans (1903).

Blackwelder (1944: 339) proposed *Callimicra loonae* as a new name, listing *C. lucida* Waterhouse and *C. lucidula* Obenberger, 1937, in synonymy, without any explanation as to why he thought a new name was needed.

Hespenheide (1979: 111) discussed the names for this species taxonomically, and considered *C. hoscheki* Obenberger (Obenberger 1922: 163) the valid species name, with *C. lucida* Waterhouse and *C. loonae* Blackwelder as synonyms, apparently thinking that *C. lucida* was preoccupied, following the entry in Blackwelder.

Bellamy (2008c: 2637), under *C. hoscheki* Obenberger, listed *C. lucida* Waterhouse and *C. loonae* Blackwelder as synonyms, following Hespenheide, and listed *C. lucidula* Waterhouse *sensu* Obenberger as a misidentification. The last is incorrect, as Obenberger simply followed the misspelling of Kerremans (1903) in his catalog, with the correct Waterhouse reference, so it is not a misidentification.

Bellamy (2008c: 2637) listed *C. lucidula* Waterhouse (1889: 165) as a valid species, using the same reference as for *C. lucida* Waterhouse which he treated as a synonym of *C. hoscheki*! There is no spelling “*Callimicra lucidula*” in Waterhouse, this was simply a spelling error starting with Kerremans (1903). He included the subsequent references Kerremans (1892: 300) and Fisher (1922: 71), neither of which used a *C. lucidula* spelling associated with *C. lucida* Waterhouse.

Taking all of the above history into account, this nomenclatural history and correct synonymy can be summarized as follows:

Callimicra lucida Waterhouse 1889: 165. **Resurrected valid name.**

Callimicra lucidula [sic] Waterhouse in Kerremans 1903: 331. Incorrect subsequent spelling.

Callimicra hoscheki Obenberger 1922: 163. **New synonym.**

Callimicra lucidula [sic] Waterhouse in Obenberger 1937: 1432. Incorrect subsequent spelling.

Callimicra loonae Blackwelder 1944: 339. Unnecessary new name for *C. lucida* Waterhouse.

Callimicra lucidula [sic] Waterhouse in Bellamy 2008c: 2637. Fictitious name with no nomenclatural standing.

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