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A new cryptic species of metallic *Chrysina* Kirby
(Coleoptera: Scarabaeidae: Rutelinae)
from western Honduras

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A new cryptic species of metallic *Chrysina* Kirby
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Abstract. A new species of *Chrysina* Kirby (Coleoptera: Scarabaeidae: Rutelinae), *Chrysina porioni* Monzón and Hawks, is described from the Sierra del Merendón west of San Pedro Sula, Honduras. This species is very similar to *C. ericsmithi* (Monzón and Cano), with which it has long been confused.

Resumen. Se describe una nueva especie de *Chrysina* Kirby (Coleoptera: Scarabaeidae: Rutelinae), *Chrysina porioni* Monzón y Hawks, de la Sierra del Merendón al oeste de San Pedro Sula, Honduras. Esta especie es muy parecida a *C. ericsmithi* (Monzón y Cano), con la cuál se ha confundido por mucho tiempo.

Key words. Rutelini, new species, jewel scarab.

ZooBank registration. urn:lsid:zoobank.org:pub:D0ABF5EE-F0AD-4E9F-AC09-9F2F2F3F7901

Introduction

The ruteline scarab beetle genus *Chrysina* Kirby includes about 130 valid species (Hawks 2017; Monzón 2017; Moore et al. 2017; Mora-Aguilar et al. 2018), including one new species described herein. Commonly known as ‘Jewel Scarabs’ for their bright iridescent and metallic coloration, they occur exclusively in the New World from the southwestern United States south to northwestern South America. Hawks (2001) provided the most recent taxonomic and nomenclatural assessment of the genus, and included a synonymic checklist of species divided into informal species groups. In 2001, about 100 species were recognized, and many more have been described during the past 19 years. A key to species groups and species of *Chrysina* does not exist, and it is beyond the scope of the present work to include such a key. The new species is a member of the *Chrysargyrea* Group (sensu Hawks 2001) and is known only from western Honduras. Based on morphological evidence, it is most closely related to *C. ericsmithi* (Monzón and Cano, 1999), known only from eastern Guatemala. Both species are metallic silver, with metallic golden color morphs occurring regularly in the new species.

Materials and Methods

This publication follows Hawks (2001) for *Chrysina* taxonomy and nomenclature, including his informal species groups. Photographs were taken with a Nikon D7200 camera and Nikon macro AF-s 105 lens. Two Nikon SB-R200 Speedlights with SW-12 diffusers were used for lighting. The holotype male is deposited in the Florida State Collection of Arthropods, Gainesville, Florida, USA. Specimens examined and paratypes deposited in the following institutions and private collections:

DCHC David C. Hawks private collection, California, USA
EAPZ Escuela Agrícola Panamericana Zamorano, Tegucigalpa, Honduras
FSCA Florida State Collection of Arthropods, Florida, USA
JBBC Julian Blackaller-Bages private collection, Mexico
JMSC José Monzón Sierra private collection, Guatemala
KPC Kelly Price private collection, Vermont, USA
MDC Maishe Dickman private collection, Connecticut, USA
MdCL Musée des Confluences, Lyon, France
THPC Thierry Porion, private collection, France
UVGC Universidad del Valle de Guatemala Collection of Arthropods, Guatemala

Genus *Chrysin* Kirby

Chrysin Kirby 1828: 522. Type species: *Chrysin peruviana* Kirby, by monotypy.

Plusiotis Burmeister 1844: 417. Type species: *Pelidnota victorina* Hope 1841: 11, by subsequent designation (Ohaus 1934: 16).

Pelidnotopsis Ohaus 1915: 257. Type species: *Pelidnota plusiotina* Ohaus 1912: 304, by monotypy.

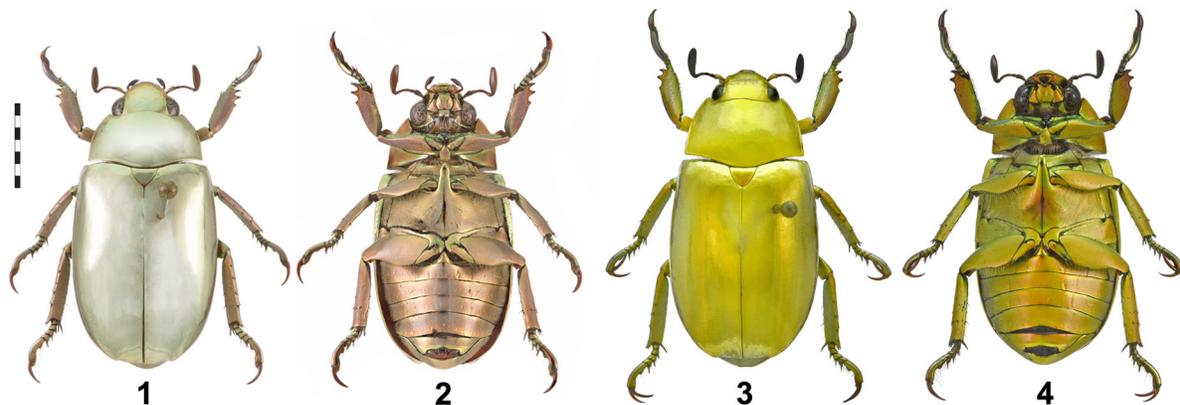
Plusiotina Casey 1915: 84. Type species: *Plusiotina aeruginis* Casey 1915: 85.

Chrysin porioni Monzón and Hawks, new species

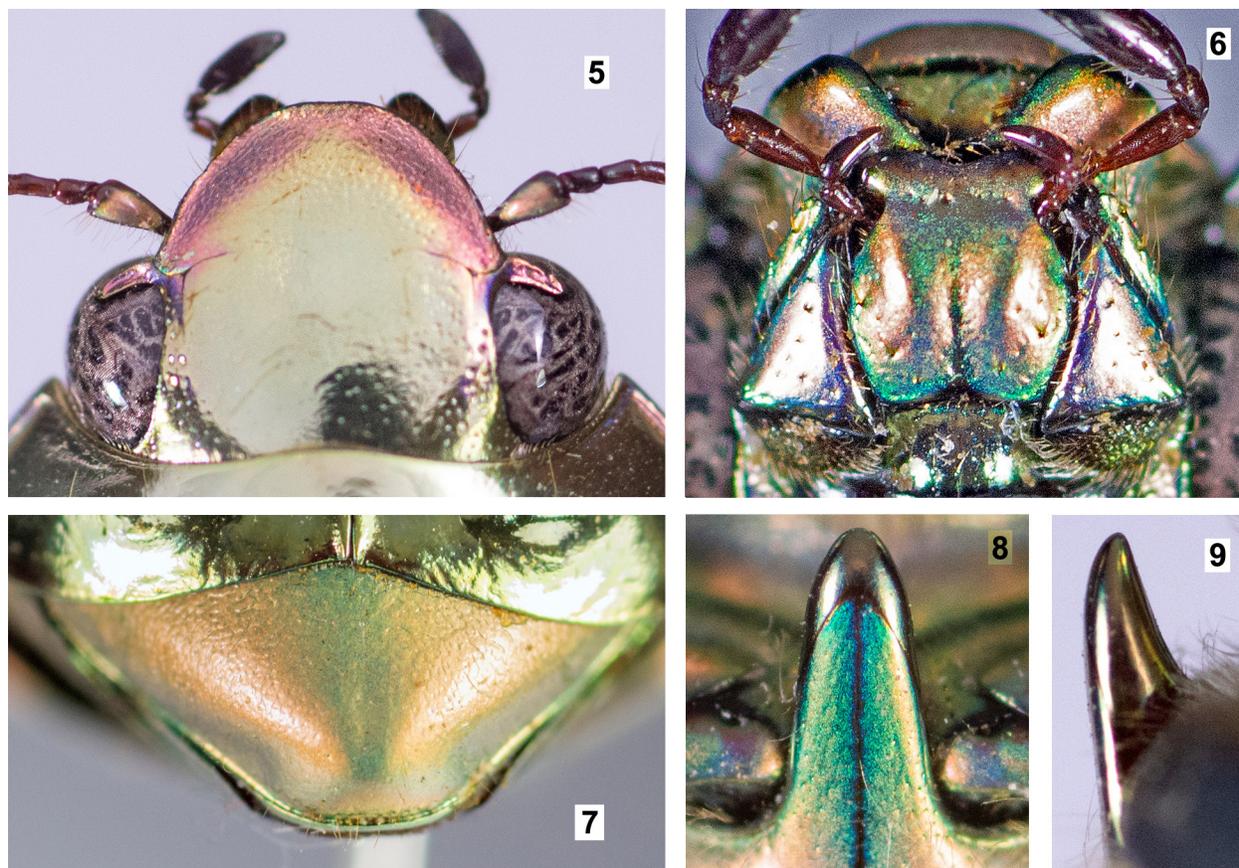
Figures 1–13, 18.

Type data. Holotype male (deposited at FSCA) labeled: a) “HONDURAS, Cortés / San Pedro Sula, camino / antenas, 1532 m alt. / 15 JUNIO 2010 / 15.506480 –88.109614”; b) on red paper, “HOLOTYPE / *Chrysin porioni* / Monzón & Hawks, 2019”. **Paratypes** (46 males and 13 females) with data as follows: Same data as holotype except “MAY 1996” (2 males and 1 female); same data except “JUNE 1998” (6 males and 5 females); same data except “JUNE 1999 (5 males and 2 females); same data except “APRIL 2008” (2 males); same data except “15 OCTOBER 2009” (4 males); same data except “SEPTEMBER 2011” (1 male and 1 female); same data except “JUNE 2014” (6 males); same data except “15 JUNE 2015” (7 males and 1 female); same data except “JULY 2015 (1 male and 1 female); same data except “JULY 2017” (2 males); “HONDURAS, Cortés: El Merendón (11 km al Oeste de S.P.S.), bosque nuboso, CG N150°20.774' W88°07.032'EPE 12 mts, 1575 m, trampa de luz, 01/VI/2011, J. Blackaller & D. Robacker col” (9 males and 2 females); “HONDURAS, Cortés: Cusuco National Park, Visitor Center, 1550 m., 4–5 JUNE 1997, D. C. Hawks, MV light” (1 male). Paratypes deposited in the collections of EAPZ, UVGC, MdCL, DCHC, JMSC, KPC, MDC and THPC.

Description, holotype male. Length 23.0 mm; width at elytral humeri 10.5 mm; maximum width (middle of elytra) 11.5 mm. Dorsal surface brilliant and polished metallic yellowish silver (Fig. 1); clypeus anterior margins, ocular canthi and lateral pronotal margins pink; antennae dark brown, scape dorsally pinkish silver; ventral surface (Fig. 2), pygidium, epipleuron and legs light brown with iridescent golden and green reflections.



Figures 1–4. Dorsal and ventral habitus of *Chrysin porioni*, scale in mm. 1–2) Holotype male from type locality. 3–4) Paratype of golden color morph from the same locality.



Figures 5–9. *Chrysina porioni*, structures of holotype male. 5) Clypeus. 6) Mentum. 7) Pygidium. 8) Mesometasternal process, ventral view. 9) Mesometasternal process, lateral view.

Head weakly convex, frons very finely and sparsely punctate, punctures shallow, becoming denser and deeper along free clypeal margins; clypeus (Fig. 5) semicircular in dorsal view and apically reflexed; interocular distance 1.8 times wider than antennal club length. **Mentum** laterally rounded with anterior fourth laterally expanding with rounded edges and angulate anterior margin; posterior margin almost flat and slightly concave, longitudinal middle furrow complete; surface with punctures scattered and deep (Fig. 6). **Pronotum** at base 2.6 times as wide as interocular distance, polished with sparse, fine punctures visible only at high magnification; 5.5 mm long and 9.0 mm wide, widest at posterior angles, marginal bead effaced between inner borders of eyes and weak in front of scutellum. **Elytra** 16.0 mm long, smooth, striae weakly impressed, visible only under magnification; apical umbone conical in dorsal view, slightly prominent; lateral margin completely beaded. **Pygidium** shagreened with dense, finely rugose punctation laterally, disc smooth; subapically convex and prominent towards apex (Fig. 7). **Venter** with metasternum with abundant long pale setae; mesometasternal process long and extending past mesofemoral base, rounded in dorsal view (Fig. 8), sharp and slightly depressed in lateral view (Fig. 9). **Legs** with protibiae clearly tridentate, apical and medial teeth well developed, third tooth smaller. **Genitalia** with parameres fused, asymmetrical; length of genital capsule 9.0 mm (Fig. 10–13).

Female. Similar to male except body more convex; tarsi slightly less robust; abdominal apical sternite not depressed. Inferior genital plates simple (Fig. 18), slightly asymmetrical (based on female with database label JMS11843).

Variation. The type series of 60 specimens exhibits little size variation. Males: length 22.0–23.5 mm; width at elytral humeri 10.0–11.0 mm; maximum width 10.5–12.0 mm. Females: length 23.0–24.0 mm; width at elytral humeri 11.0–11.5 mm; maximum width 12.0–13.0 mm. Fifteen male specimens (35% of all males) represent a



Figures 10–17. *Chrysina porioni* and *C. ericsmithi* male genital capsules, scale in mm. 10) *C. porioni* dorsal view. 11) *C. porioni* ventral view. 12) *C. porioni* right lateral view. 13) *C. porioni* left lateral view. 14) *C. ericsmithi* dorsal view. 15) *C. ericsmithi* ventral view. 16) *C. ericsmithi* right lateral view. 17) *C. ericsmithi* left lateral view.



Figure 18. *Chrysina porioni* female inferior genital plates, scale in mm.

metallic golden color morph (Fig. 3–4). One of the fifteen golden males has a very bright red venter and anterior half of the clypeus, and the legs have a paler reddish tint.

Diagnosis. *Chrysina porioni* is a (typically) silver species in the Chrysargyrea Group (sensu Hawks 2001), of which there are four species in Honduras and Guatemala. Among these four species, the most distinctive is *C. strasseni* (Ohaus), which is metallic both dorsally and ventrally, and the only silver *Chrysina* species that has the head and pronotum golden. *C. pastori* (Curoe) can be easily separated by its dorsal and ventral greenish-silver color and by its unique male genitalia, in which the parameres narrow to a thin, sharp apex. The only species with which *C. porioni* can be confused is *C. ericsmithi*. These can best be separated by the male genitalia, which have similar but differently shaped parameres (Fig. 14–17). The most conspicuous differences in the parameres are wide, flat, obtusely triangular lateral flanges in *C. porioni* (Fig. 10), and narrower, more acutely triangular flanges in *C. ericsmithi* (Fig. 14).

Distribution. *Chrysina porioni* is known only from western Honduras on the eastern slope of the Sierra del Merendón west of San Pedro Sula and in Cusuco National Park, at elevations between 1500 and 1600 meters above

sea level. *Chrysina ericsmithi* occurs in a low elevation (1100 m) cloud forest on the western slope of the Sierra del Merendón in eastern Guatemala, Izabal Department, near Negro Norte. Both of these species occur at low to moderate elevations and apparently are separated by the high elevation north-south crest of the Sierra del Merendón.

Etymology. It is our pleasure to name this beautiful species for our friend and great insect collector Thierry Porion from France.

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