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A new species of *Chrysina* Kirby (Coleoptera: Scarabaeidae: Rutelinae)
from Oaxaca, Mexico

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A new species of *Chrysina* Kirby (Coleoptera: Scarabaeidae: Rutelinae) from Oaxaca, Mexico

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Abstract. *Chrysina arellanoi* **new species** (Coleoptera: Scarabaeidae: Rutelinae) is described from the southernmost part of the Sierra Madre del Sur in Oaxaca, Mexico.

Resumen. Se describe la **especie nueva** *Chrysina arellanoi* (Coleoptera: Scarabaeidae: Rutelinae) de la parte mas meridional de la Sierra Madre del Sur en Oaxaca, México.

Introduction

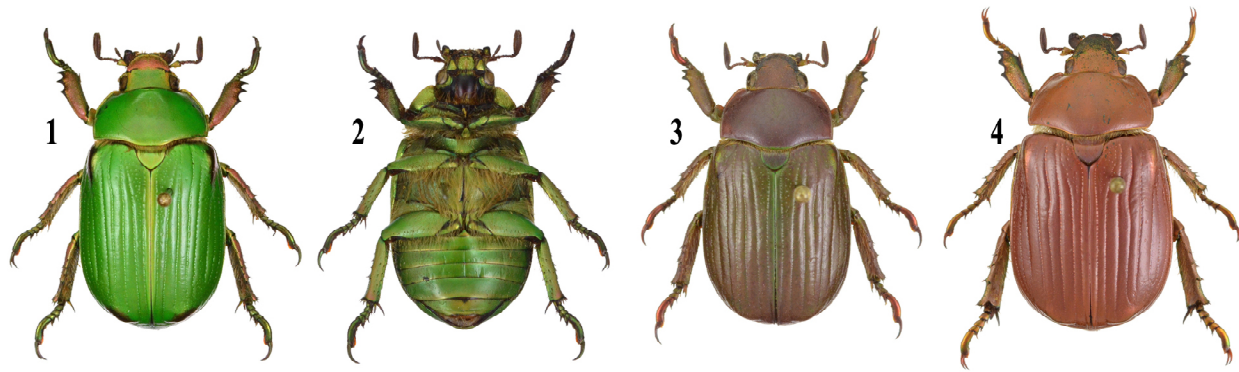
Currently the genus *Chrysina* Kirby (Coleoptera: Scarabaeidae: Rutelinae) is composed of 107 described species (Monzón and García 2011, Curoe 2011). The genus is distributed from the southwestern United States of America (specifically Arizona, New Mexico and Texas) through Mexico, Central America to Colombia and Ecuador (Morón 1990). Recent collecting in some isolated mountains in Mexico by Hector Arellano has provided specimens of several undescribed species. One of these species from the Sierra Madre del Sur in Oaxaca, México, is described here as new. This species belongs in the *adelaida* group (*sensu* Morón 1990, modified by Hawks 2001), which is now composed of 16 species. All the species in this group except *C. centralis* (Morón) and *C. pehlkei* (Ohaus) are known to occur in Mexico.

Chrysina arellanoi Monzón, new species

(Figures 1-11)

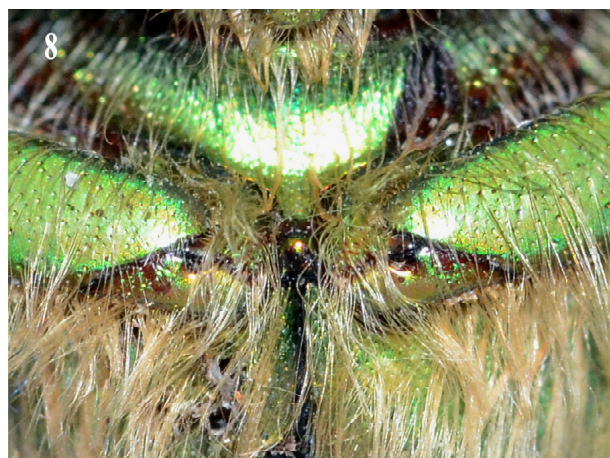
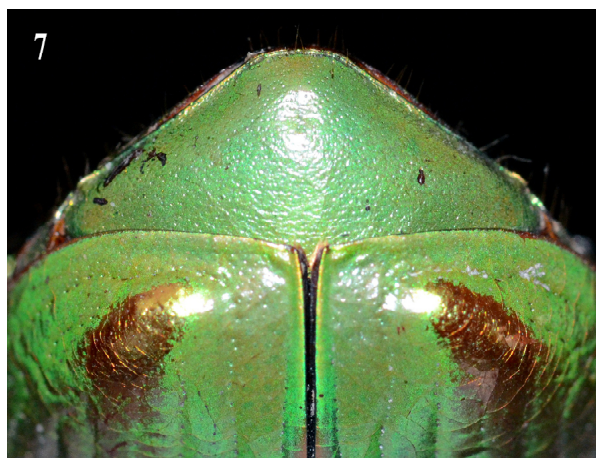
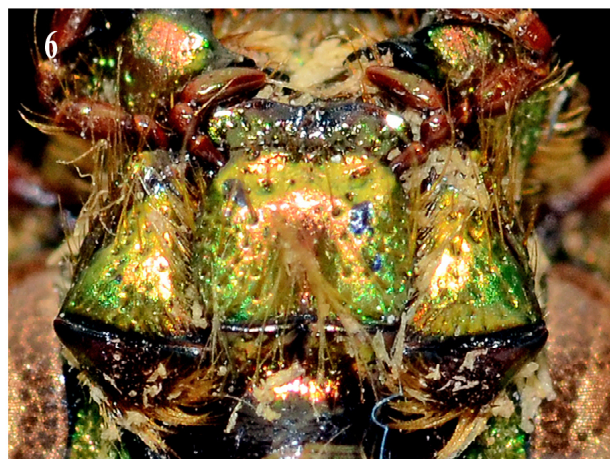
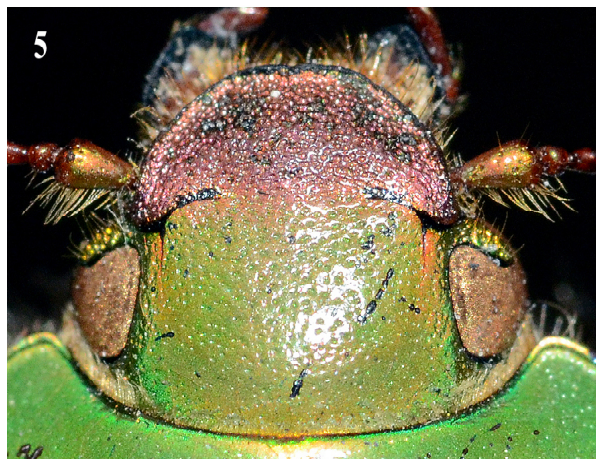
Type material. **Holotype** male and **allotype** female (Universidad Nacional Autónoma de México (UNAM)) labeled MEXICO, Oaxaca, San Sebastián. 2,650 mts. alt., 07 AGOSTO 2010, Colector Hector Arellano. **Paratypes** (12 males and 19 females) labeled as follows: Same data as holotype (2 males); same data except 09 SEPTIEMBRE 2010 (1 male); same data except 05 JULIO 2010 (3 females); same data except 04 AGOSTO 2010 (4 females); same data except 03 SEPTIEMBRE 2010 (6 females); same data except 01 OCTUBRE 2010 (4 females); same data except 2,550 mts. alt., 10 AGOSTO 2010 (7 males); same data except San Mateo Río Hondo. 2,450 mts. alt., 15 JULIO 2010 (2 males and 2 females). Paratypes deposited in the Universidad del Valle de Guatemala Collection of Arthropods (UVGC), Florida State Collection of Arthropods (FSCA) and José Monzón private collection (Guatemala).

Description. **Holotype male.** Length 24.0 mm; width at elytral humeri 11.0 mm; maximum width (middle of elytra) 12.5 mm. Color of dorsum shiny yellowish green; anterior half of clypeus pinkish brown with metallic reddish gold on anterior margin, ocular canthi yellowish green, antennal segments brown with scape dorsum yellowish green; pronotal margins iridescent yellowish green; scutellum with lateral margins yellowish green; elytra with external margins iridescent yellowish green, humeri and apical umbone greenish gold; pygidium green with lateral margins golden green. Color of venter yellowish green with golden and reddish iridescence and reflections. Legs with tibia reddish brown, coxae, trochanter and ventral surfaces metallic greenish gold; mesometasternal protrusion greenish gold. Clypeus (Fig. 5) with free margins, rounded semi-trapezoidal in dorsal view, slightly reflexed; anterior surface coarsely rugopunctate, frontal disc punctures sparse; interocular distance 1.9 times wider than antennal club length. Mentum (Fig. 6) quadrate; anterior depression wide and short; lateral depressions faint; posterior depression narrow, deep and long; surface setigerously punctate, punctures large and sparse;



Figures 1-4. Dorsal and ventral habitus of *Chrysina arellanoi* (1.5x). **1-2)** Male paratype from San Sebastián. **3)** Purplish brown form, male from San Sebastián. **4)** Reddish brown form, female from San Mateo Rio Hondo.

setae long, pale and thick. Pronotum at base 2.6 times as wide as interocular distance; sculpture similar to frons except punctures sparse and becoming denser towards lateral margins. Lateral margin completely beaded except effaced on anterior margin between inner border of eyes. Elytra punctate striate; punctures in striae moderate in size, deep; intervals moderately convex. Elytron 16.0 mm long and 2.9 times as long as pronotum; lateral margin with bead complete. Pygidium punctate; apical margin with scattered pale setae and metallic shine; surface convex and prominent towards the apex (Fig. 7). Fifth



Figures 5-8. *Chrysina arellanoi* holotype structures. **5)** Clypeus. **6)** Mentum. **7)** Pygidium. **8)** Mesometasternal protrusion.

and apical sternite with depression. Venter with mesometasternal protrusion reduced, apex rounded (Fig. 8). Metasternum, mesofemora and mesotibiae densely setigerously punctate, setae dense, long and pale. Legs with protibiae clearly tridentate; dorsal and ventral surface of protibiae rugopunctate. Genitalia with parameres asymmetrical, apically constricted, fused except for very narrowly rounded bidentate apex, left paramere semi-straight; right paramere with shoulder close to apex; length of genital capsule 8.0 mm (Fig. 9, 10).

Allotype female. Similar to male except as follows: length 26.5 mm; width at elytral humeri 13.0 mm; maximum width (at middle of elytra) 15.0 mm; interocular distance 1.6 times wider than antennal club length; pronotum at base three times as wide as interocular distance; tarsi less robust; fifth and apical sternite without depression; genital plates slightly asymmetrical; elongately produced with truncate apex bearing laterally projecting tooth; setae long, pale and scattered (Fig. 11).

Variation. Males length 23.0 to 24.0 mm; width at elytral humeri 11.0 to 12.0 mm; maximum width (middle of elytra) 12.0 to 13.0 mm. Females length 22.5 to 27.0 mm; width at elytral humeri 11.0 to 14.0 mm; maximum width (middle of elytra) 12.0 to 15.5 mm. One male specimen represents a purplish brown form (Fig. 3) and five female specimens represent a reddish brown form (Fig. 4).

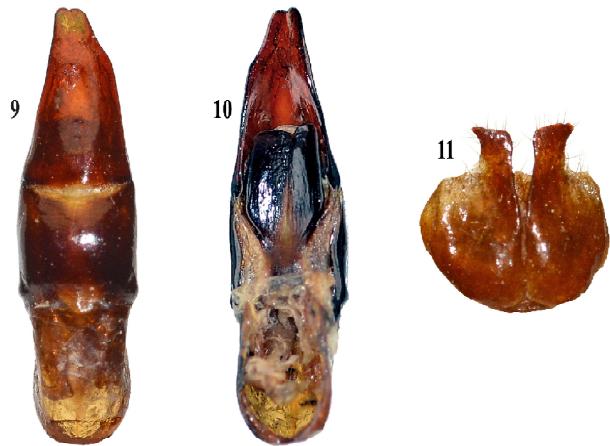
Etymology. It is my pleasure to name this species for my friend and great insect collector Hector Arellano, who is doing a great job of exploring the entomofauna of Mexico.

Diagnosis. *Chrysina arellanoi* is a green species in the *adelaida* group (*sensu* Morón 1990, modified by Hawks 2001). Along with *C. citlaltepeltamayatl* (Blackaller-Bages and Delgado), *C. hawksii* Monzón, *C. lacordairei* (Boucard), *C. pehlkei* (Ohaus) and *C. purpurata* (Morón), *C. arellanoi* is the only currently described green *Chrysina* species that has both the humeri and apical umbone metallic gold. In this group of species *C. purpurata* has a completely reddish brown head and *C. citlaltepeltamayatl* a pronotum laterally reddish pink. The species most similar to *C. arellanoi* are *C. pehlkei* and *C. hawksii*, but they can easily be distinguished by the male genitalia.

Distribution. *Chrysina arellanoi* is currently known to occur only in the Sierra Madre del Sur in the Mexican state of Oaxaca. It has been collected around the towns of San Mateo Río Hondo and San Sebastián, which are roughly between 50 and 60 kilometers in a straight line north of Puerto Angel.

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I am very grateful to Hector Arellano (Torreón, Mexico) for bringing to my attention this nice series of the new species of *Chrysina*. Enio B. Cano and Jack C. Schuster from the Universidad del Valle de Guatemala Collection of Arthropods contributed greatly with their comments and reviewing this manuscript. I would also like to thank Ingeniero Guillermo Ortiz Aldana (Ministerio de Agricultura y Ganadería de Guatemala) for his help to import specimens for this research.



Figures 9-11. *Chrysina arellanoi* holotype and allotype genital structures (10x). **9)** Male genital capsule dorsal habitus. **10)** Male genital capsule ventral habitus. **11)** Female inferior genital plates.

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