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A new species of *Acmaeodera* Eschscholtz, 1829  
(Coleoptera: Buprestidae) from the state of  
Michoacán, Mexico

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# A new species of *Acmaeodera* Eschscholtz, 1829 (Coleoptera: Buprestidae) from the state of Michoacán, Mexico

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**Abstract.** *Acmaeodera parasuperba* Hansen and Westcott, **new species** (Coleoptera: Buprestidae), from Michoacán, is described, imaged, and its relationship discussed.

**Key words.** Polycestinae, Nearctic, taxonomy, jewel beetles.

**ZooBank registration.** urn:lsid:zoobank.org:pub:CF1482BC-B4AD-49DA-8A4A-9D2207690729

## Introduction

The description of new species of buprestids and subsequent taxonomic revisions are necessary parts of continuing to advance our understanding of buprestid hierarchical relationships. Awareness of those relationships and the biodiversity that exists among them is the starting point that allows informed decisions on a host of issues from pest management to conservation. Once a species is known to science, it can be studied and its role in the larger ecosystem more fully understood. Here we describe a new species with the hope our efforts will aid in further study of the Mexican buprestid fauna. This brings the number of described *Acmaeodera* Eschscholtz species in Mexico to 156 (Westcott 2024).

## Materials and Methods

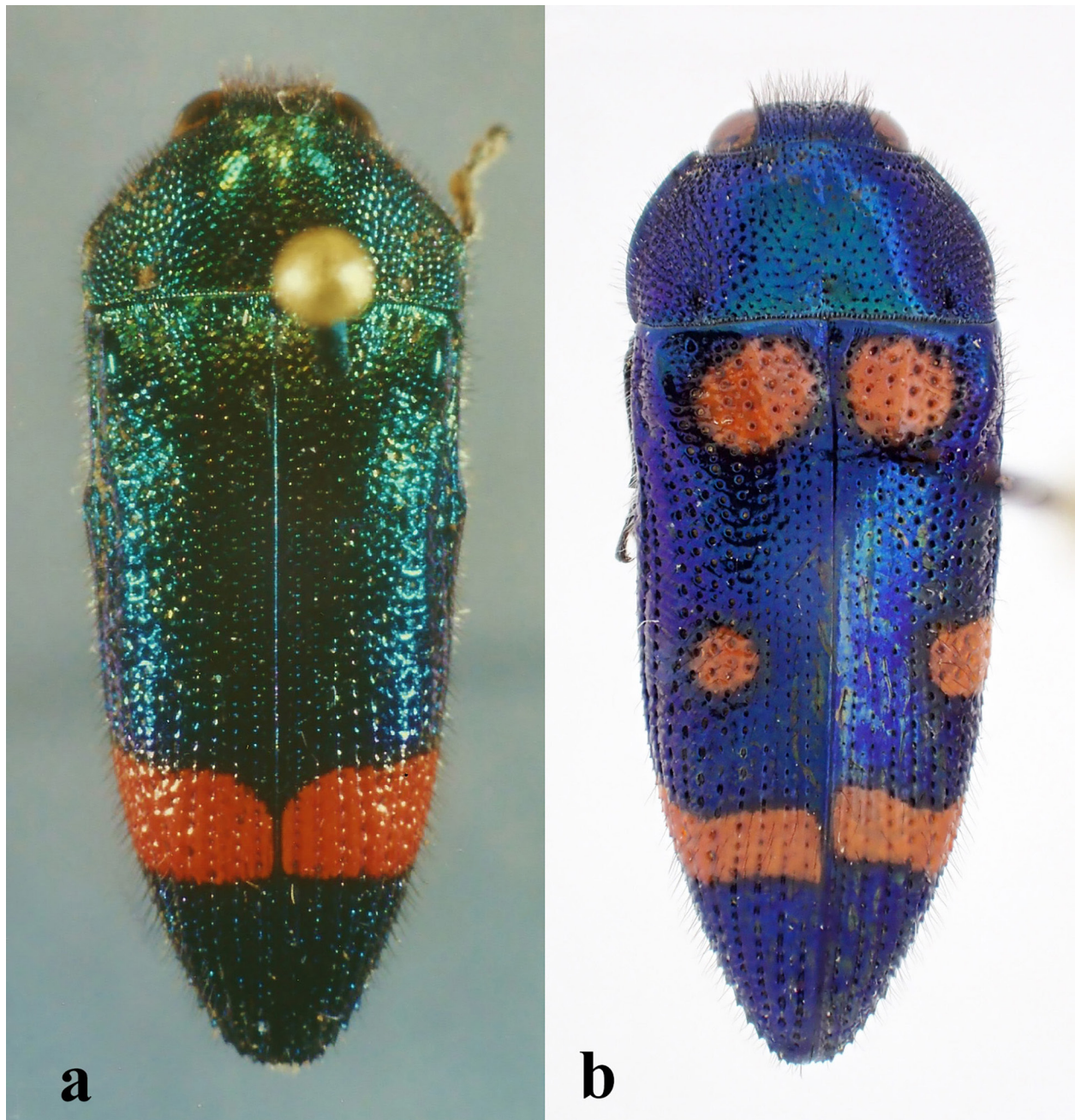
Collection abbreviations used herein are as follows: CSCA = California State Collection of Arthropods, Sacramento; JAHC = J. A. Hansen, Los Indios, Texas; RLWE = R. L. Westcott, Salem, Oregon; TCMC = T. C. MacRae, Wildwood, Missouri; UCDC = University of California, Davis. A single vertical bar (|) signifies a line break on the holotype specimen label, and a double vertical bar (||) signifies a separate label.

## Results

### *Acmaeodera parasuperba* Hansen and Westcott, new species

(Fig. 1a)

**Description.** Holotype male: Length 11.12 mm, width 4.24 mm; robust; dorsal surface moderately clothed with erect long black setae; head and pronotum shining green, immaculate; elytra strongly shining, green blending to blue and narrowly purple just before irregular broad red transverse band that is interrupted by suture, then narrowly purple blending to blue apically; beneath shining slightly bluish-green, rather densely clothed with moderately long subrecumbent white setae.



**Figure 1.** Dorsal habitus of *Acmaeodera* spp. **a)** *Acmaeodera parasuperba*, new species, male holotype. **b)** *A. superba*.

**Head.** Densely, cribrately punctured; front convex, slightly flattened above, vertex with median carina extending from occiput to frons; clypeus deeply, arcuately emarginate, clothed with setae lighter than those on frons; eyes with inner margins parallel, oval, wider below than at vertex; antennal insertions separated by less than the length of the first antennomere; antennae reaching middle of pronotum when laid along the lateral margin, first antennomere as long as the following three united, which are globular, antennomeres serrate from fifth, 5–10 triangular, 11<sup>th</sup> subquadrate. **Pronotum.** With blue sheen, slightly wider than two times the length, widest behind middle, immaculate; punctures on disc separated by two times their diameter, larger and closer together laterally, each with a single black seta; anterior margin broadly sinuate, slightly produced medially; posterior margin straight; lateral margin narrowly reflexed, visible from apex to just before base from above; three depressions at base, one at middle flanked by two laterally.



**Elytra.** Base depressed at suture; umbone not prominent; basolateral angle quadrate; stria punctures much narrower than interspaces on disc; interstria spaces with small, shallow punctures each with a single black seta; sides subparallel to about middle then attenuate to narrowly rounded apices; lateral margin serrate from middle to apices, sinuate at metacoxa when viewed laterally. **Venter.** Densely punctate; prosternum with anterior margin retracted and slightly sinuate; proepimeron with large punctures set close together; metacoxa with inner margin slightly dilated, anterior margin sinuate, posterior margin arcuate; last abdominal ventrite without subapical carina, margin strongly reflexed downward. **Legs.** Femoral setae longer than width of femur.

**Material examined.** Holotype: "MEXICO: Michoacan | 24km. S Las Canas | (Pueblo Nuevo), Ruta | 37, 28-IX-1986 | R.Miller & L.Stange. || HOLOTYPE | *Acmaeodera* | *parasuperba* | Hansen & Westcott '24" [handwritten on red rectangular label] [CSCA]. Paratypes are from the following localities in Michoacán: same as holotype (11); Km 167.5, hwy. 37, 32 km S Cuatro Caminos, 230 m, 18°47.643', -102°04.782', 28-viii-2002 (4); same, except 2-x-2022 (2); 2.3 km S Cupuancillo (hwy. 37, S of Chilar), 18°47.862', -102°06.408', 2-x-2002 (3); MEXICO, Michoacán, 5 Km W Zicuirán, hwy. to Cuatro Caminos, 250 m, 18°53.548', -102°01.030', 26.viii.02 (1) [CSCA, JAHC, RLWE, UCDC]; 29.5 km S Cuatro Caminos, Hwy. 37, 18°47.643'N, -102°04.782'W, 230 m, 2-viii-2005, cut ex dead branch *Mimosa benthamii* Macbr. (Fabaceae) (1) [TCMC].

**Variation.** Specimens range in length from 9.39–12.21 mm. One specimen examined has a small red basolateral spot on either side of the pronotum. Another has a small, approximately square orange-red marking at the elytral base on either side of the sutural interval. Most are like the holotype, the ground color bright metallic green except blue just anterior to red marking and at apex. Variants range from blue to black, all with metallic reflections above and below to at least some degree. All have the characteristic large preapical elytral red markings, which vary only slightly in shape. The fifth ventrite is shallowly depressed laterally, without a subapical plate, but sometimes has a slight transverse swelling behind apical margin.

**Sexual dimorphism.** In males, the unguis teeth of the tarsal claws are larger and clearly extend more than half the length of a claw. In females the teeth do not exceed half the length of a claw. The eighth sternite covering the aedeagus is dark yellow to yellow or light brown apically but dark brown covering the ovipositor. The junior author has observed this distinction many times in the genus *Acmaeodera*, but we have not seen it discussed. Unfortunately, this character is not always visible on a dry specimen without relaxing it.

**Etymology.** The specific epithet is an adjective referring to its similarity to *Acmaeodera superba* Waterhouse, based on the Greek "para-" meaning resembling.

**Discussion.** This species can easily be distinguished from *A. superba* (Fig. 1b) by the difference in pronotal shape and elytral markings. The pronotum of *A. parasuperba* is less expanded at the base and less strongly convergent to the apex. A basal orange-red spot at the base of each elytron is absent in *A. parasuperba* but almost always present in *A. superba*; only four of the 65 specimens examined lack it.

*Acmaeodera parasuperba* appears to be restricted to the lower thorn woodland vegetation type between 187 and 228 meters elevation. The one exception we have seen is at 590 meters. All 65 specimens of *A. superba* we examined were from the tropical dry forest vegetation type, at elevations ranging from 1200–1400 meters. An exception was a specimen collected at only 550 meters, and it was the closest to any of the localities where the new species is found, at a distance of 267 km SbW (Fig. 2).

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We thank Alexey Tishechkin (CSCA) for sending images of specimens under his care and loaning them for our study and Corwin Parker (Wilsonville, OR) for taking the image of *Acmaeodera superba*. We would also like to thank Norman E. Woodley and Joshua P. Basham for their reviews of our manuscript.



**Figure 2.** Distribution of *Acmaeodera parasuperba*, new species (circles) and *A. superba* (squares).

## Literature Cited

Westcott RL. 2024. Two new species of *Acmaeodera* Eschscholtz, 1829 (Coleoptera: Buprestidae) from southern Mexico. *The Pan-Pacific Entomologist* 100(1): 70–74.

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