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Artículo científico
(Original paper)**A NEW SPECIES OF THE GENUS *PUCAYA* FROM PERU (COLEOPTERA: SCARABAEIDAE: DYNASTINAE)****NUEVA ESPECIE DEL GÉNERO *PUCAYA* DE PERÚ (COLEOPTERA: SCARABAEIDAE: DYNASTINAE)****ALFREDO EDGARDO GIRALDO-MENDOZA**Universidad Nacional Agraria La Molina – Museo de Entomología Klaus Raven Büller. Av. La Molina s/n, Lima 12, Lima, Perú.
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Giraldo-Mendoza, A. E. (2019) A new species of the genus *Pucaya* from Peru (Coleoptera: Scarabaeidae: Dynastinae). *Acta Zoológica Mexicana* (nueva serie), 35, 1–6.
<https://doi.org/10.21829/azm.2019.3502224>**ABSTRACT.** A new species of Cyclocephalini scarab, *Pucaya tabaconas* nov. sp. is described and illustrated based on specimens collected in Cajamarca department. The genus *Pucaya* is recorded for the first time in Peru. A key to the known species of this genus is included.**Key words:** Cyclocephalini; key; Neotropics; South America; Systematics**Giraldo-Mendoza, A. E.** (2019) Nueva especie del género *Pucaya* de Perú (Coleoptera: Scarabaeidae: Dynastinae). *Acta Zoológica Mexicana* (nueva serie), 35, 1–6.
<https://doi.org/10.21829/azm.2019.3502224>**RESUMEN.** Se describe e ilustra una especie nueva de escarabajo Cyclocephalini, *Pucaya tabaconas* nov. sp., con base a especímenes colectados en el departamento de Cajamarca. Se registra por primera vez el género *Pucaya* en Perú. Se incluye una clave para separar a las especies conocidas de este género.**Palabras clave:** clave taxonómica; Cyclocephalini; Neotrópico; Sudamérica; Sistemática**INTRODUCTION**

The genus *Pucaya* was described by Ohaus (1910) to accommodate a dynastine species with dubious tribal assignment, *P. castanea* Ohaus, 1910 based on specimens from Pucay and two other localities in southwestern Ecuador. During the six subsequent decades, three taxa were added to the genus, based on specimens from Colombia: *P. pulchra* Arrow, 1911 (Arrow, 1911), *P. castanea columbiana* Beck, 1942 (Beck, 1942) and *P. punctata* Endrödi, 1968 (Endrödi, 1968).



In Endrödi's contributions (1968, 1985), *Pucaya* was assigned to Pentodontini tribe, its distribution was extended to Central America and *P. castanea columbiana* was considered merely as a morphological variant without subspecies or variety rank. Ratcliffe (2003) offered a detailed re-description and distributional data for *P. castanea* in Costa Rica and Panama. López-García *et al.* (2015) reviewed the genus including a key to species, re-descriptions, distributional data for Colombia and natural history notes, also finding morphological evidence to synonymize *P. punctata* with *P. pulchra*. Recently, Paucar-Cabrera and Moore (2018) transferred *Pucaya* from Pentodontini into Cyclocephalini based on morphological and molecular data, providing a new review with distributional data for Ecuador. According to most recent checklists and reviews, this genus has not been previously recorded in Peru (Ratcliffe *et al.*, 2015; López-García *et al.*, 2016; Paucar-Cabrera & Moore, 2018).

The objective of this paper is to describe a new species of *Pucaya* from Santuario Nacional Tabaconas–Namballe nature conservation area in northern Peru (Cajamarca), and include it into a key for the species of this genus.

MATERIAL AND METHODS

During her research visit to Museo de Entomología Klaus Raven Büller – Universidad Nacional Agraria La Molina, Lima, Peru (MEKRB) in June 2018, Margarita López-García suggested to the author that *Pucaya* specimens housed in this entomological collection could belong to an undescribed species. This preliminary observation was verified with subsequent review of these specimens and comparison with published descriptions of previously known species.

Morphological terms of description, diagnosis and proposed key to species follow to most recent reviews of genus *Pucaya* (López-García *et al.*, 2015; Paucar-Cabrera & Moore, 2018). Type specimens of the new species were deposited in MEKRB.

Type specimens were photographed with a Canon© EOS Rebel T5i DSLR, equipped with Macro lens and rail. Each image includes a series of photos taken in different planes, which were stacked with the Helicon focus 5.1 software. Parameres were extracted, treated for 10 minutes in 20% KOH, washed with distilled water and adhered to a small piece of cardboard. Drawings were done by the prints of photographs, observations with stereomicroscope and digital improving with a graphic design software. Label data for the new species is quoted *verbatim*; different lines of the label are separated by a diagonal slash (/) and different labels are indicated by brackets ([]). Distributional map was prepared using SimpleMappr (Shorthouse, 2010).

RESULTS

Pucaya tabaconas Giraldo, new species (Fig. 1, 2, 3)

Type material

Holotype (male): [PERU, Cajamarca, San Ignacio/Miraflores, El Sauce/1500 m, 05°10'23.3"S/79°16'48.7"W/16-Apr-03, Col. R. Acosta] [Sant. Nac. Tabaconas/Namballe, Bosque/húmedo premontano/trop. colecta manual]. Paratype (male) with the same labels.

Description

Habitus (Fig. 1). Length 30 mm, width 14 mm. Coloration, black background with reddish brown marks on disk and lateral surfaces of pronotum and elytra; venter dark reddish brown; head, tibiae and tarsi black.



Head. Clypeus trapezoidal, with apex very broadly truncate, shallowly emarginated, with anterior and lateral margins upturned, rough surface with scaly appearance. Frontoclypeal suture absent. Frons flat, rough surface with scaly appearance, with two vertically raised horns. Interocular distance equals four times the transverse ocular diameter. Eye canthus with three apical erect setae. Antenna with 10 antennomeres arranged as follows: 1 elongate with thickened apex, 2–7 short, 8–10 forming a club slightly longer than 2–7 joined. Mandibles small and slender, hidden below clypeus.

Pronotum. Surface smooth with minute, sparse punctures. Apex with a large central transversal depression incised until middle of pronotal disk. Lateral protuberances at both sides of depression, each one with a cusp near to midline (Fig. 2). Anterior margin, lateral margins and base with marginal bead, bead obsolete in one fourth of basal length adjacent to each posterior angle. Scutellar surface with a few minute punctures.

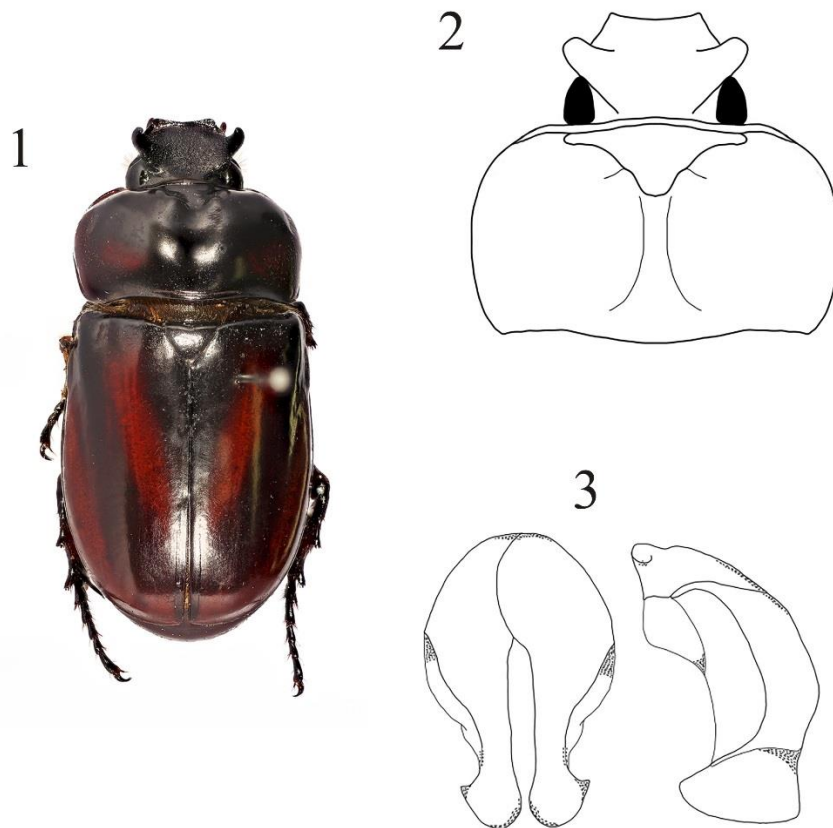
Elytra. Surface smooth with minute, sparse punctures; punctures becoming denser along humeral area and lateral margins. Elytral suture noticeable on apical third.

Pygidium. Surface smooth with minute, sparse punctures; convex in lateral view; apical margin clothed with a rim of long yellow setae.

Legs. Protibia tridentate, two adjacent apical teeth and basal tooth removed from others. Protarsus enlarged, larger claw with apex incised. Metatibial apex crenulate, with 11 spinules. Apex of first meta-tarsomere triangularly elongated.

Venter. Prosternal process short, not projecting beyond procoxa; apex transversely oval, anterior 2/3 convex, posterior 1/3 flat, anterior and posterior parts separated by a sulcus; clothed with long yellow setae. Mesosternum and Metasternum surfaces densely punctuated; clothed with a dense cover long yellow setae. Abdominal sternites scarcely punctuated, glabrous.

Parameres (Fig. 3). In caudal view, slightly asymmetrical, apices not dilated and rounded, with lateral teeth not separated from distal end. In lateral view, blunt apex and lateral tooth (as a small tubercle) are visible.



Figures 1–3. *Pucaya tabaconas* sp. nov: 1) Holotype habitus, 2) Head and pronotum, 3) parameres, caudal and lateral views.

Variation. Male paratype is smaller (length 25.3 mm, width 11.5 mm), with reddish brown marks somewhat vanished under black color, venter darker, shorter frontal horns, pronotal protuberances less developed, elytral suture basally disaggregated into punctures and apex of metatibia with 12 spinules. Female unknown.

Diagnosis. *P. tabaconas* is recognized by medium to large body size (25–30 mm), antennal club longer than antennomeres 2–7, pronotal protuberances well developed, elytra with disperse minute punctures and impressed sutural stria on apical third, apex of metatibia with 11–12 spinules and parameres with lateral teeth of apices not separated from distal end by a carina.

Distribution and habitats. Known only from type locality (Fig. 4). According to label data, vegetation is tropical pre-montane moist forest, and specimens were collected by hand collecting. In comparison, *P. castanea* inhabits montane forests or coffee crops, while *P. pulchra* has been found in more opened habitats as grasslands, reeds o banana crops (Ratcliffe, 2003; López-García *et al.*, 2015).

Etymology. The specific name alludes to the nature conservation area where the type specimens were collected.



Figure 4. Known distribution of *Pucaya* species in Central and South America. Approximate distribution of *P. castanea* and *P. pulchra* based on data available in Ratcliffe (2003), López-García *et al.* (2015) and Paucar-Cabrera & Moore (2018).



Previous keys to species of genus *Pucaya* should be modified in the following way for to include the new species.

1. Size medium (20.0–24.0 mm). Pronotum with protuberances scarcely developed. Elytra striate-punctate on basal 2/3 length and impressed sutural stria at least on apical half. Apex of metatibia with 14–17 (rarely 12) spinules. Parameres with apices dilated, lateral teeth absent (Fig. 5a). *Pucaya pulchra* Arrow
- Size medium to large (23.0–32.5 mm). Pronotum with protuberances well developed. Elytra smooth with disperse minute punctures and impressed sutural stria at most on apical third. Apex of metatibia with 9–12 spinules. Parameres with apices not dilated, lateral teeth present. 2
2. Antennal club shorter than antennomeres 2–7. Elytra without impressed sutural stria on entire length. Apex of metatibia with 9 spinules. Parameres with lateral teeth of apices separated from distal end by a carina (Fig. 5b). *Pucaya castanea* Ohaus
- Antennal club longer than antennomeres 2–7. Elytra with impressed sutural stria on apical third. Apex of metatibia with 11–12 spinules. Parameres with lateral teeth not separated from distal end (Fig. 3). *Pucaya tabaconas* sp. nov.

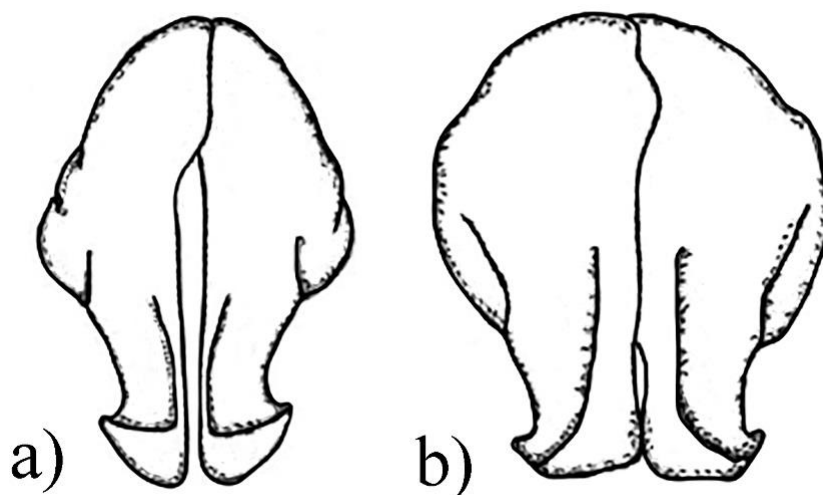


Figure 5. Parameres of *Pucaya* species in caudal view: a) *P. pulchra*, b) *P. castanea*. Redrawn of López-García *et al.* (2015).

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