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A new species of *Phalangogonia* Burmeister (Coleoptera: Scarabaeidae: Rutelinae: Anoplognathini) from Costa Rica

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Abstract

Phalangogonia hawksi sp. n. from the Osa Peninsula of Costa Rica is described. The genus *Phalangogonia* Burmeister now includes nine species. An updated key to the species in this genus is provided to accommodate the new species.

Key words: Coleoptera, Scarabaeidae, Rutelinae, Anoplognathini, *Phalangogonia*, Costa Rica, taxonomy

Introduction

Smith and Morón (2003) recently revised the genus *Phalangogonia* Burmeister (Coleoptera: Scarabaeidae: Rutelinae: Anoplognathini). This genus of medium-sized (1.8-3.2 cm in length) scarabs is endemic to southern México and Central America. Smith and Morón (2003) commented on the rarity of many species of *Phalangogonia*. Half the species are known only from the type series and the majority of species are known from a dozen or fewer specimens in collections. This is in spite of thorough collecting efforts in many localities where these rare species occur. Unsurprisingly, a new species has now been discovered. Recently, while examining scarab specimens in the collection of David Hawks (University of California-Riverside), I found one remarkable specimen of *Phalangogonia* from the Osa Peninsula of Costa Rica. The description of this new species is given below.

Phalangogonia hawksi new species (Figs. 1–3)

Type specimen. Male holotype deposited at the Instituto Nacional de Biodiversidad (INBio), Santo Domingo de Heredia, Costa Rica. Holotype labeled "COSTA RICA:

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PUNTARENAS Rancho Quemado, 300 m 25 May 2001 M. Posla" (typeface) and "PHALANGOGONIA HAWKSI SMITH ♂ HOLOTYPE" (handwriting and typeface, black border). Type locality: Rancho Quemado (8°40'N, 83°34'W; Osa Peninsula), Puntarenas, Costa Rica.

FIGURE 1. Habitus of male *Phalangogonia hawksi*.

FIGURES 2–3. Male genitalia of *Phalangogonia hawksi*. 2. lateral view; 3. dorsal view.

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Diagnosis. This species is distinguished from all other species in the genus *Phalangogonia* by the following combination of characters: dorsal colour tan with prominent black pattern on head, pronotum, and elytra (Fig. 1); frons glabrous; eye bulbous, protruding from side of head in dorsal view; pronotum moderately punctate; pygidial disc shagreened to granular, setose; mesometasternal process robust, not declivous with respect to venter; male genitalia as in Figs. 2–3.

Description of holotype. Male. Length 21.0 mm, width 11.0 mm. Colour tan with prominent black pattern on head, pronotum, and elytra (Fig. 1); ventral surface and pygidium black. *Head:* Dorsal surface densely punctate. Clypeus setose, weakly rounded, apex reflexed. Frontoclypeal suture complete, straight. Eye large, bulbous, length in lateral view 0.3 x head length in lateral view. Labrum with apex vertically produced with respect to clypeus, produced at middle, triangular. Mentum setose, apex strongly reflexed into oral cavity. Antenna with 10 antennomeres; club length greater than length of antennomeres 2–6. *Pronotum:* Surface glabrous, moderately punctate (densely punctate near lateral border). Lateral border distinct; apical, basal borders indistinct. *Elytron:* Surface glabrous. Striae weakly defined, punctate. Epipleuron with ventral surface flat. *Pygidium:* Surface shagreened, setose; setae long, cream-coloured. *Venter:* Thorax glabrous medially, setose laterally; setae long, yellowish-brown. Mesometasternal process projecting parallel to body, apex adjacent to procoxae. Abdominal sternites sparsely setose. *Legs:* Protibia with 3 teeth. Mesotibia and metatibia with medial carina. Tarsomeres 1–4 wider than long, cup-shaped. Mesotarsomere and metatarsomere 1–3 with ventral pad of thick, yellowish-brown setae. Tarsomere 5 elongate, with weak ventrobasal tooth. Tarsal claws with modified claw thickened when compared to other claw, apex bifurcate. *Male genitalia:* Figs. 2–3. Phallobase fused to parameres. Parameres fused together except at apex; dorsomedially without keel or swelling; apex constricted, curved ventrally.

Variation. Unknown. The holotype is the only specimen examined.

Etymology. I am very pleased to name this species after David C. Hawks (University of California-Riverside). It was during a visit to Riverside when I discovered the holotype of this species in Dave's collection.

Distribution. Known only from the Osa Peninsula of Costa Rica.

Key to the species of *Phalangogonia* (modified from Smith and Morón [2003])

1. Pygidial disc appearing smooth, without noticeable microsculpturing (some scattered punctures and setae present); mesometasternal process robust, declivous (sloping away) with respect to venter 2
- Pygidial disc shagreened, rugose or granular; mesometasternal process weak to robust, apex parallel with respect to venter 3

2(1). Metatarsomeres 1–3 with well developed pad of ventral spines and setae; male parameres with distinct dorsomedial keel, apices with strong tooth; Puebla, Veracruz,

Oaxaca and Veracruz, México..... *P. lacordairei* Bates

- Metatarsomeres 1–3 with weak pad of ventral spines and setae; male parameres with poorly defined dorsomedial keel, apices with weak tooth; eastern Guatemala to northwestern Honduras .....*P. dispar* Ohaus

3(1). Eyes small, almost flush with side of head in dorsal view..... 4

- Eyes bulbous, distinctly protruding from side of head in dorsal view 5

4(3). Pronotum with sparse, scattered punctures; clypeus with surface mainly glabrous (sometimes with sparse, scattered setae); southern México to Guatemala ....*P. obesa* Burmeister

- Pronotum with dense, sometimes confluent punctures; clypeus with surface uniformally setose; El Salvador .....*P. punctata* Franz

5(3). Mesometasternal process produced to or surpassing base of procoxae 6

- Mesometasternal process not reaching base of procoxae..... 8

6(5). Dorsal colour tan with prominent black markings on head, pronotum, and elytra (Fig. 1); male parameres as in Figs. 2–3; Osa Peninsula, Costa Rica..... *P. hawksi* Smith

- Dorsal surface with uniform coloration..... 7

7(6). Dorsal colour mostly pale green; Oaxaca, México .... *P. jamesonae* Smith and Morón

- Dorsal colour tan or light to dark yellowish-brown (sometimes creamy white when alive); Honduras to Panama .....*P. sperata* Sharp

8(5). Head dorsally glabrous; pygidium brown to black, granulate; length 18–24 mm; Quezaltenango, Guatemala..... *P. parilis* Bates

- Head dorsally setose; pygidium tan, not granulate but with obvious microsculpturing; length 24–31 mm; Oaxaca to Chiapas, México..... *P. ratcliffei* Smith and Morón

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Reference

Smith, A. B.T. & Morón, M.A. (2003) Revision and phylogenetic analysis of the Central American endemic genus *Phalangogonia* Burmeister (Coleoptera: Scarabaeidae: Rutelinae: Anoplognathini). *Systematic Entomology,* 28, 323–338.

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