

## A new *Plusiotis* from Guatemala and Belize (Coleoptera: Scarabaeidae)

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### Abstract

*Plusiotis purulhensis* Monzón and Warner, new species is described from specimens collected in Guatemala and Belize. Adult habitus and genitalia of both sexes are illustrated.

### Introduction

Morón (1990) provided a color figure of a presumptive female of *Plusiotis auropunctata* Ohaus collected in Guatemala. *Plusiotis auropunctata* was previously known only from the male holotype collected in Chiapas, Mexico. Recent collecting in Guatemala by José Monzón and in Belize by L. C. Dow and S. A. Adams has yielded male and female specimens which match Morón's (1990, plate 8, fig. 7) figure. Dissection of the males revealed that they possess genitalia of a form very different from that of the *P. auropunctata* holotype illustrated in the same work, and that these specimens actually represent an undescribed species which we here describe.

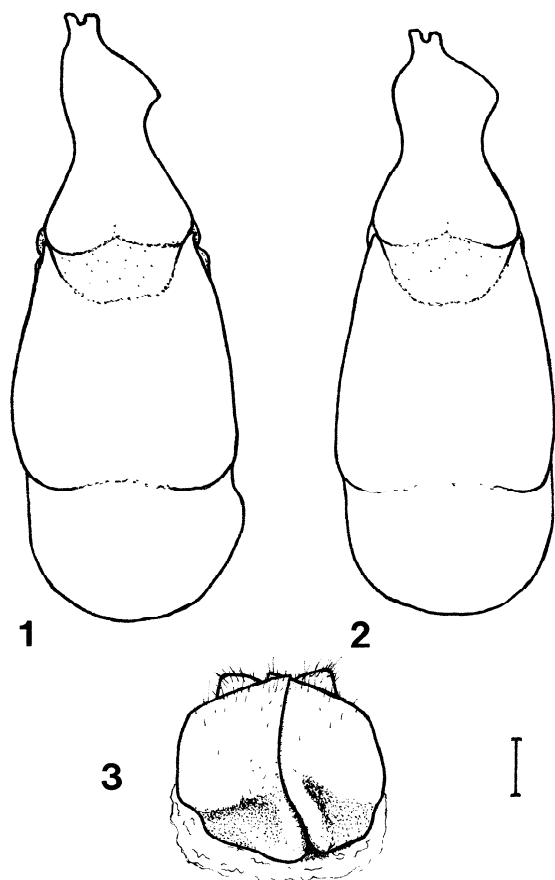
Methodology and terminology for appendage surfaces are as in Warner *et al.* (1992).

*Plusiotis purulhensis* Monzón and Warner  
New Species  
Figures 1-4

**TYPE MATERIAL:** Holotype male (Florida State Collection of Arthropods, Gainesville) labeled "Gua-

temala, Baja Verapaz, km 150 on road to Coban, near Purulhá; 1500 m, cloud forest, x-1991, J. Monzón". Allotype female (National Museum of Natural History, Washington) labeled "Guatemala". Paratypes (5 males, 6 females) with data as follows: "Guatemala: Baja Verapaz, Purulhá, viii-11 1983"; same data except "viii-23-1992, Hubbel"; "Guatemala: Baja Verapaz, km 156 on road to Coban, viii-28-1991"; same data except "viii-18-1991"; "Guatemala: Baleu, ix-17-1966, E. Welling"; same data except "viii-10-1966"; "Guatemala: Alta Verapaz, Beleu, Mpio. San Cristobal Verapaz, 1150 m, vii-17-1990"; "Belize: Cayo Distr., Mtn. Pine Ridge, 1000' Falls, v-25-1990, L. C. Dow"; same data except "vi-15-1990"; same data except "vi-23-1990"; same data except "vii-2-1990". Paratypes are deposited in the Florida State Collection of Arthropods and in the collections of R. Cunningham, D. Curoe, L. C. Dow, J. D. Glaser, P. Hubbel, M. Hudson, M. A. Morón, T. Taylor, and the authors.

**DIAGNOSIS:** Dorsally opaque lavender to muddy lavender-brown; elytra with metallic gold punctures; head and pronotum moderately densely punctulate. Genitalia as in Figs. 1-3.



**Figures 1-3.** *Plusiotis purulhensis*, male and female genitalia. 1) holotype (dorsal view). 2) paratype, Belize (dorsal view). 3) paratype female (caudal view).

**DESCRIPTION:** Holotype male, length 27.5 mm; width at elytral humeri 12.0 mm; greatest width 14.0 mm. Dorsal and ventral ground color opaque lavender-brown with golden or golden green reflections along margins of most sclerites and external elytral margins; elytra festooned with coarse metallic golden punctures. Legs opaque lavender-brown with golden to greenish highlights on coxal joints and femoro-tibial articulation; tarsi piceous with metallic bluish green sheen. **HEAD** densely micropunctate between scattered larger (but fine) punctures, these separated by one to four or five times their own diameters, deeper and contiguous near external clypeal margin. Clypeus subsemicircular, surface slightly depressed along weakly reflexed external margin. Antennal club about half as long as dorsal interocular width. Mandibles externally broadly and weakly lobed.

**PRONOTUM** with anterior marginal bead effaced in medial third, posterior marginal bead weak but noticeable along weak medial lobe, bead strong on arcuate lateral margins; disc punctured as on head except punctures sparser, slightly smaller and shallower centrally, becoming deeper and dense laterally. **ELYTRA** nearly three times as long as pronotum, each with punctures moderate near suture, becoming coarse between obsolescent second (from suture) stria and epipleuron, mostly confused lateral to second stria. Apical umbone oblique with narrowly and strongly tumid apex at submarginal terminus of second stria. **PYGIDIUM** confusedly rugulose-punctulate, weakly convex, free submargin laterally weakly impressed. **VENTER** with mesepimera and metepisterna imbricately rugulose, setigerous; metasternum nearly contiguously setigerously punctate except for nearly impunctate area extending from mesometasternal process to posterior margin anterior to posterior trochanters. Mesometasternal process reaching posterior edge of lanceolate prosternal process. Abdominal sternites nearly impunctate on disc, micropunctate to rugulose laterally; penultimate sternite with posterior margin weakly concave, translucent piceous posterior to margin; last sternite with apical half abruptly depressed and translucent dark brown in about transverse third. **LEGS:** dorsal margin of anterior tibia tridentate in distal two-fifths; distal two teeth slightly more approximate than middle and proximal teeth. Anterior tarsus with proximal four segments broader than long; larger protarsal claw with small tubercle on interior surface at about apical fifth. **GENITALIA** (Fig. 1) nonmetallic, with parameres asymmetrical, medially and apically constricted, fused except for narrowly bidentate apex, left tooth (=apex of left paramere) shorter than right, subapical expansion much stronger on left margin.

Allotype female, length 29.0 mm, width at elytral humeri 12.5 mm, widest width 14.5 mm. Similar to male except abdomen convex, last abdominal sternite without apical depression; proximal four protarsal segments not expanded, larger protarsal claw smaller and without subapical tubercle (based on paratypes; protarsi missing in allotype). Genitalia (Fig. 3) with inferior genital plates each subhemihexagonal, subsymmetrical apically, basally strongly contorted and asymmetrical.

**VARIATION:** length 26.5 mm to 32.0 mm, width at elytral humeri 10.5 mm to 15.0 mm, widest width 14.0 mm to 17.0 mm. The examined specimens form



**Figure 4.** *Plusiotis purulhensis*, holotype, dorsal habitus.

a fairly uniform series except in size and in slight variation in intensity of the lavender ground color. The Belize specimens have piceous tarsi with a weak metallic sky blue to golden sheen, and have more evident elytral striae. One Guatemalan male (Purulhá) has cobalt blue tarsi. There is moderate variation in male genital form (Fig. 2).

**ETYMOLOGY:** This unusual species is named for the type locality, Purulhá, Guatemala.

**RELATIONSHIPS:** *Plusiotis purulhensis* is apparently most closely related to *P. auropunctata* as indicated by Morón's placement of a *P. purulhensis* female as the presumed female of *P. auropunctata*. The subapically expanded male genitalia of *P. purulhensis* actually appear more similar to those of *Plusiotis aurofoveata* Morón. *Plusiotis purulhensis* may be immediately differentiated from both these and all other described *Plusiotis*, however, by the combination of its unique lavender or lavender-brown ground color, gold punctured elytra and different genital form.

**REMARKS:** In life *P. purulhensis* is a distinct lavender color unique in the genus. After death most specimens fade to a muddy brownish or reddish lavender color. The type locality is an area of

"Low montane pluvial forest" according to the ecological classification of Holdrige (1987). Dominant plant species in the area include: *Alchornea latifolia* Schwartz, *Quercus purulhana* Trelease, *Quercus oocarpa* Liebmann, *Podocarpus oleifolius* D. Donin, *Alfaroa costaricensis* Standley, *Billia hipocastanum* Peyritsch, *Magnolia guatemalensis* Donn, *Chaetoptelea mexicana* Liebmann, *Clethra johnstoni* Standley & Steyermark, *Nectandra sanguinea* Rottboll, *Cecropia peltata* L., *Ingalaurina* Schwartz, *Cyathea* sp., *Brunellia* sp., and *Engelhartia* sp. (Monterroso 1976). The Belize site is in an area of oak-pine woodland described in detail by Johnson and Chaffey (1973).

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