



**Description of a New Species Of *Ataenius* Harold, 1867
of the “*A. Aequalis-Platensis*” Group (Coleoptera:
Scarabaeidae: Aphodiinae: Eupariini) from Mexico**

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DESCRIPTION OF A NEW SPECIES OF *ATAENIUS* HAROLD,
1867 OF THE “*A. AEQUALIS-PLATENSIS*” GROUP
(COLEOPTERA: SCARABAEIDAE: APHODIINAE: EUPARIINI) FROM MEXICO

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ABSTRACT

Ataenius suineata **sp. nov.** is described based on 3 specimens from Acahuzotla, Guerrero, Mexico. Distinctive characteristics for this species are illustrated. A revised partial key to the Mexican species of “*Ataenius aequalis-platensis*” group is provided. This species may be considered endemic to Mexico.

Key Words: Taxonomy, Scarabaeidae, Aphodiinae, *Ataenius*, Mexico, Distribution, Endemism

RESUMEN

Se describe *Ataenius suineata* **sp. nov.** con base en tres especímenes provenientes de Acahuzotla, Guerrero, México. Las características distintivas de esta especie son ilustradas. Se provee una clave parcial del grupo “*Ataenius aequalis-platensis*” para la especie mexicana. Esta especie puede ser considerada endémica de México.

Palabras Clave: Taxonomía, Scarabaeidae, Aphodiinae, *Ataenius*, México, Distribución Endemismo

The group of species “*Ataenius aequalis-platensis*” was defined by Stebnicka (2005, 2007) and comprises 27 species (Table 1). The species of this group are recognized by the “body oval, elongated, parallel, moderately convex, usually glabrous, shiny, length 2.1-6.0 mm; head moderate in size, genae prominent; clypeal edge usually rounded, subangulate or denticulate on each side of median emargination; clypeal surface with fine transverse wrinkles; vertex finely punctate; pronotum convex, transverse, margined basally, lateral margin usually fringed with setae of various lengths, surface with two or three kinds of punctures; scutellum triangular; elytra parallel-sided or arcuate, finely margined basally, humeral denticles fine; elytral striae more or less distinctly impressed, striae punctures fine to moderate; intervals flat or convex, in some species setigerous; profemoral surface shiny, punctate; mesofemora and metafemora punctate or smooth, postfemoral lines incomplete or absent; mesotibia and metatibiae slender, apex of metatibia with slender spurs and fringe of very short setae, fine accessory spine present or lacking; tarsi slender, basal tarsomere of metatarsus longer than upper tibial spur, equal in length or shorter and usually shorter than following tarsomeres together; ventral surface glabrous, abdominal

sternites finely fluted along sutures and usually impunctate at middle, sometimes setigerous laterally, disc of pygidium eroded; the males of most species have the terminal spur of protibia hooked inwardly, or slightly bent downward or sinuate, the pronotal punctures less dense than in females especially at middle of disc, and the clypeal surface less distinctly sculptured; like in the other species-groups of *Ataenius*, the males of all species have the penultimate abdominal sternite shorter and less deeply fluted than in females and disc of pygidium longer; male genitalia are usually well differentiated, mostly those of *aequalis* type with variously shaped apices of the parameres, while those of *platensis* type are lightly sclerotized with almost parallel-sided, apically rounded and weakly diversified parameres”.

Recently I found 3 specimens in the Entomology Collection (IEXA) of the Institute of Ecology, A. C. (INECOL), México, representing a new species of the group from Acahuzotla, Guerrero, Mexico, on the internal slope of the southern Sierra Madre. The purpose of this paper is to describe this new species and to revise the key presented by Stebnicka (2005). With this new species there are 11 species of “*A. aequalis-platensis*” group in Mexico (Table 1).

TABLE 1. DISTRIBUTION OF AMERICAN SPECIES OF "ATAENIUS AEQUALIS-PLATENSIS" GROUP, SENSU STEBNICKA (2005, 2007). ABBREVIATIONS: USA: UNITED STATES OF AMERICA, MEX: MEXICO, GUA: GUATEMALA, BEL: BELIZE, HON: HONDURAS, SAL: EL SALVADOR, NIC: NICARAGUA, CR: COSTA RICA, PAN: PANAMA, WI: WEST INDIES, COL: COLOMBIA, VEN: VENEZUELA, GUY: GUYANA, ECU: ECUADOR, PER: PERU, BRA: BRAZIL, BOL: BOLIVIA, URU: URUGUAY, PAR: PARAGUAY, ARG: ARGENTINA.

Species / Country	U	M	G	B	H	S	N	C	P	W	C	V	G	E	P	B	B	U	P	A
	S	e	u	e	o	a	i	I	a	I	o	e	U	c	e	r	r	o	U	r
	A	x	a	l	n	l	c	R	a	W	I	n	Y	u	r	a	a	l	r	a
<i>A. abanacy</i> Stebnicka 2005	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>A. aequalis</i> Harold 1880																				
<i>A. borjae</i> Stebnicka 2005																				
<i>A. caicarae</i> Stebnicka 2005	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>A. castaniellus</i> Bates 1887																				
<i>A. clavatus</i> Schmidt 1916																				
<i>A. clitellarius</i> Petrovich 1973																				
<i>A. cochabambae</i> Stebnicka 2005																				
<i>A. depilis</i> Petrovich 1976																				
<i>A. desertus</i> Horn 1871	X	X																		
<i>A. guanacastae</i> Stebnicka 2005																				
<i>A. guriensis</i> Stebnicka 2005																				
<i>A. hirsutus</i> Horn 1871	X	X																		
<i>A. koelleri</i> Balthasar 1963																				
<i>A. tanguidus</i> Schmidt 1911	X	X																		
<i>A. lenkoi</i> Petrovich 1973																				
<i>A. lobatus</i> Horn 1871	X	X																		
<i>A. longiclavus</i> Petrovich 1970																				
<i>A. onkonensis</i> Stebnicka 2005																				
<i>A. platensis</i> (Blanchard, 1846)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>A. plamanni</i> Petrovich 1973																				
<i>A. pseudoclavatus</i> Stebnicka 2005																				
<i>A. pseudousingeri</i> Galante <i>et al.</i> , 2003	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>A. punctipennis</i> Harold 1868																				
<i>A. suineata</i> Deloya sp. nov.	X	X																		
<i>A. setiger</i> Bates 1887	X	X																		
<i>A. usingeri</i> Hinton 1937	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>A. variopunctatus</i> Schmidt 1922																				
Total species (28)	7	11	5	3	4	4	1	4	5	5	3	8	1	3	1	9	6	1	3	8

ATAENIUS SUINEATA DELOYA **SP. NOV.** (FIGS. 1-6)

Description

Holotype male. Length 4.2 mm, humeral width 1.7 mm, elongated-oblong, shiny, reddish-black; legs, anterior margin of head, and anterior side of pronotum reddish. Head. Clypeus: anterior margin rounded on each side of a wide, deep, margin shaped like an open “u”, anterior surface transversally rugose, basal surface with fine punctures regularly spaced; front with medium-size punctures sparsely distributed and separated by a distance measuring its own length or less. Thorax. Pronotum (Fig. 1): transverse, wider than its length (1.00:0.67), base and sides marginate and flattened setae of equal length around the lateral and basal margin, with the same length as the third protarsus, separated by less than its own length; base arched and very slightly bisinuate, sides slightly arched and crenulate; basal angles rounded and crenulate toward the base near the humeral *callus*, anterior angles obtuse, anterolateral region lacking expanded area; surface of the glabrous disc with mixed punctation; dense fine points, regularly spaced and separated by 1-2 times their own diameter in the anterior half, large points scarce on the basal half, irregularly scattered and intermixed with fine punctures; lateral surface with mixed punctation, large punctures, dense and close together. Scutellum longer than wide, surface aplannate. Elytrae: longer than their wide (1.00:0.73), shiny; intervals highly convex, with coarse punctures separated by its own or smaller diameter, the first lateral interval corroded, glabrous on the disc, short, inconspicuous setae on the lateral margin. Protibia tridentate, dorsal surface bright, with homogeneous punctation, protibial spur apically elbowed and projected downward, longer than the first respective tarsomere. Mesotibia with well-developed accessory spine equal in length to the apical setae, one seta between the mesotibia and inferior spur, sides carinate, superior spur equal in length to the first respective mesotarsus. Metatibia: accessory spine well-defined, similar to that of mesotibia, one seta between the metatibia and inferior spur, sides aserrate, superior spur slightly shorter than the first respective metatarsus. Profemur: surface shiny, with homogeneous punctation, superior side lacking laminar expansion, perimarginal line present. Mesofemur: shiny, with homogeneous punctation, inferior side with incomplete marginal line, 40% impressed. Metafemur: surface shiny, with homogeneous punctation, incomplete marginal line, 30% impressed. Mesosternon carinate between mesocoxae. Metasternon with longitudinal furrow in the metasternal plate; metasternal plate shiny, with fine punctation and 2-3 large points on each side of the metasternal furrow. Abdomen (Fig. 2): flutes at the base of the

segments, abdominal sternites with large punctation on the sides, medium punctures in the center. Pygidium: surface 2/3 scabrous, 1/4 marginate and punctate, lacking medium longitudinal carina. Aedeagus: parameres shorter than the phalobase (0.84:1.00) (Fig. 3), in lateral view, parameres bifurcate, short superior projection with sharp apex and projected inwards (Figs. 3 and 4), elongated inferior projection facing downward with apex slightly depressed and setae inconspicuous (Figs. 5 and 6).

Allotype female. Total length 4.1 mm, humeral width 1.6 mm, protibial spur elongated with a sharp apex projecting downward, longer than the first protarsus, inferior line of mesofemur 70% impressed, inferior line of metafemur 50% impressed, metasternal plate with 0-4 large points on each side of the longitudinal canal.

Variation in the paratype. In the only male paratype, the absence of large punctures on each side of the metasternal furrow is noted.

Material Studied

Holotype and allotype labelled thus: “MEXICO: Guerrero, Acahuizotla, VI-93, E. Pokorny, lgt.”; paratype male, same data, except for the addition of “5-V-86, mercurial light, A.C. Deloya.” The holotype and allotype are deposited in the Entomological Collection of the Institute of Ecology, A.C. (IEXA); the paratype is deposited in Instituto de Biología, UNAM (IBUNAM).

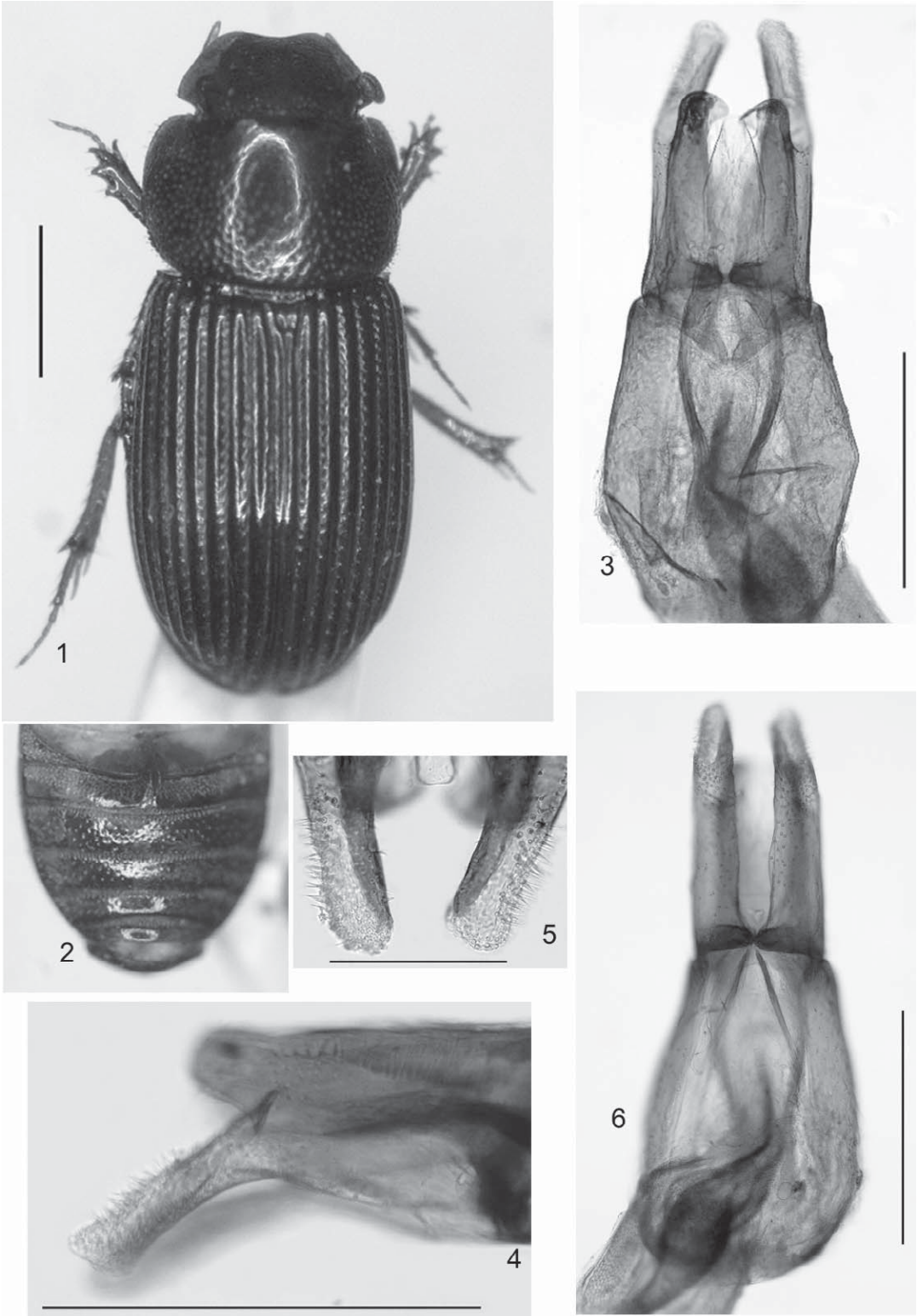
Type-locality. Acahuizotla, Guerrero, Mexico.

Etymology

The specific name *A. suineata* **sp. nov.** is an anagram of the genus *Ataenius*.

Remarks

Ataenius suineata **sp. nov.** can be recognized by the following characteristics: male genitalia differ from the common pattern of the species of “*A. aequalis-platensis*”, the parameres of *A. suineata* are forked and shorter than the phallobase (0.73:1), with many setae at apical margin; anterior margin of the clypeus rounded and partially rugose, basal third of the elytral intervals convex, ventral posterior marginal line face of the mesofemur and metafemur incomplete, base of all abdominal sternites visibly fluted, mesosternum carinate between the mesocoxae, mesotibia- and metatibia with accessory spine and one seta between it and the inferior spur, abdominal sternites with homogeneous punctation, anterior edge of pygidium punctate, front and disc of pronotum with heterogeneous punctation, scutellum longer than wide.



Figs. 1-6. *Ataenius suineata* **sp. nov.**, male paratype. 1, dorsal habitus (line = 1 mm); 2, abdominal sternites (scale = Fig. 1); 3, aedeagus, dorsal view (line = 0.5 mm); 4, parameres, lateral view (line = 0.5 mm); 5, parameres apex (line = 0.2 mm); 6, aedeagus, ventral view (line = 0.2 mm).

Ataenius suineata **sp. nov.** is similar to *A. usingeri* Hinton 1937; both species have anterior margin of the clypeus rounded; basal third of the elytral intervals convex, ventral posterior marginal line of the mesofemur and metafemur incomplete; mesotibia and metatibia with accessory spine and one seta between it and the inferior spur. In contrast, *A. suineata* has scutel-

lum longer than wide; parameres: apex strongly projected downward and bifurcate, inferior side sharply curved, superior side slightly bisinuate (Figs. 4 and 5). *Ataenius suineata* lives in tropical semideciduous forests at an altitude of 700 m on the internal slope of the Southern Sierra Madre; it is considered possibly endemic to Mexico.

MODIFICATION OF KEY *ATAENIUS* HAROLD, “*A. AEQUALIS-PLATENSIS*” GROUP (*SENSU* STEBNICKA, 2005)

- 6. Body shiny, clypeal margin widely rounded 7
- 6'. Body dull, clypeal margin widely rounded; pronotum with coarse punctures concentrated around smoother, finely uniformly punctate median anterior disc; coarse pronotal punctures on sides separated by one their diameter or more. Peru *A. abancay* Stebnicka
- 7(6). Pronotal disc with widely spaced punctures on anterior half; mix of coarse and shallow punctures on posterior half, coarse punctures widely separated. Lateral and posterolateral areas of pronotal disc with coarse and shallow punctures, coarse punctures separated by less than its own diameter, fused on the anterolateral margins. Southern Mexico *A. suineata* **sp. nov.**
- 7'. Basal third of pronotum with widely spaced punctures, lateral area with mix of shallow and coarse punctures, coarse punctures contiguous, never fused. Central America and Mexico. *A. usingeri* Hinton

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REFERENCES CITED

HINTON, H. E. 1937. Description of new American *Ataenius*, with notes on others. *Ann. Mag. Nat. Hist.* 10: 177-196.

STEBNICKA, Z. 2005. The New World species of *Ataenius* Harold, 1867. VI. Revision of the *A. Aequalis-platensis*-group (Coleoptera: Scarabaeidae: Aphodiinae: Eupariini). *Acta Zoologica cracoviensia* 48(1-2): 99-138.

STEBNICKA, Z. 2007. The genus *Ataenius* Harold, 1867 (Coleoptera: Scarabaeidae) of the world. *Iconography. Institute of Systematics and Evolution of Animals, Polish Academy of Science, Krakow, Poland.* 155 pp.