

Genus	Vol. 24(1): 109-114	Wrocław, 30 III 2013
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Plagiometriona obrienorum, a new species from Rondonia, Brazil (Coleoptera: Chrysomelidae: Cassidinae: Cassidini)

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ABSTRACT. *Plagiometriona obrienorum*, a new species is described from Rondonia state in Brazil. It is close to *P. phoebe* (BOHEMAN, 1855) widespread in South America and *P. centromaculata* SEKERKA & WINDSOR, 2012 described from Bolivia.

Key words: entomology, taxonomy, Coleoptera, Chrysomelidae, Cassidinae, Cassidini, *Plagiometriona*, new species, Brazil.

INTRODUCTION

Plagiometriona SPAETH, 1899 is a moderately large genus containing 84 species distributed from Mexico to northern Argentina with a single species in Cuba (BOROWIEC 1999, BOROWIEC & ŚWIĘTOJAŃSKA 2013). Species prefer mid to high elevations (500–4000 m) with the greatest number of species in Andean countries (Colombia, Ecuador and Peru). Those species for which we know their biology are associated with one plant family, the Solanaceae (summarized in BOROWIEC and ŚWIĘTOJAŃSKA 2013) but host plants are presently known based on direct feeding observations only for 18 of 84 species and were mostly recorded recently (WINDSOR et al. 1992, FLINTE et al. 2008, 2010, SEKERKA & WINDSOR 2012). Few published records on association with Convolvulaceae (SILVA et al. 1968) and Boraginaceae (ZAYAS 1989) are based on single observations and most likely represent casual visits rather than feeding. The genus was never revised and its taxonomy is partly complicated as some species groups exhibit great variability in pattern. However, SPAETH (1937) proposed a key to the species groups dividing the genus into two subgenera, *Parametriona* SPAETH, 1937 and *Plagiometriona*, on the basis of the shapes of the humeral angles and the pronotum. Later

BOROWIEC (1999) synonymized the two subgenera. The shape and the degree to which the humeral angles protrude anteriorly along the pronotum is a sexually dimorphic character present in males of *Plagiometriona* s.str. (sensu SPAETH 1937) while females frequently have diverging humeral angles. Nevertheless, SPAETH's key is still valid as most characters are sexually constant and easy to observe.

In material studied recently we found a new species belonging to the former monotypical subgenus (sensu SPAETH 1937), with elytral pattern similar to two species of the first group proposed by SPAETH (1937): *Plagiometriona phoebe* (BOHEMAN, 1855) and *P. centromaculata* SEKERKA & WINDSOR, 2012. Its description is given below.

MATERIAL AND METHODS

Photos were taken using Nikon SMZ 1500 stereomicroscope with Nikon Coolpix 4500 photo camera as several separate layers and combined in the Helicon Focus software. Exact label data are cited for type material. A forward slash (/) separates different lines and a double slash (//) different labels of data. Descriptions are based on comparison with types of similar species and photos of most of them are available at Borowiec and Świętojańska (2012).

DESCRIPTION OF A NEW SPECIES

***Plagiometriona obrienorum* n. sp.**

ETYMOLOGY

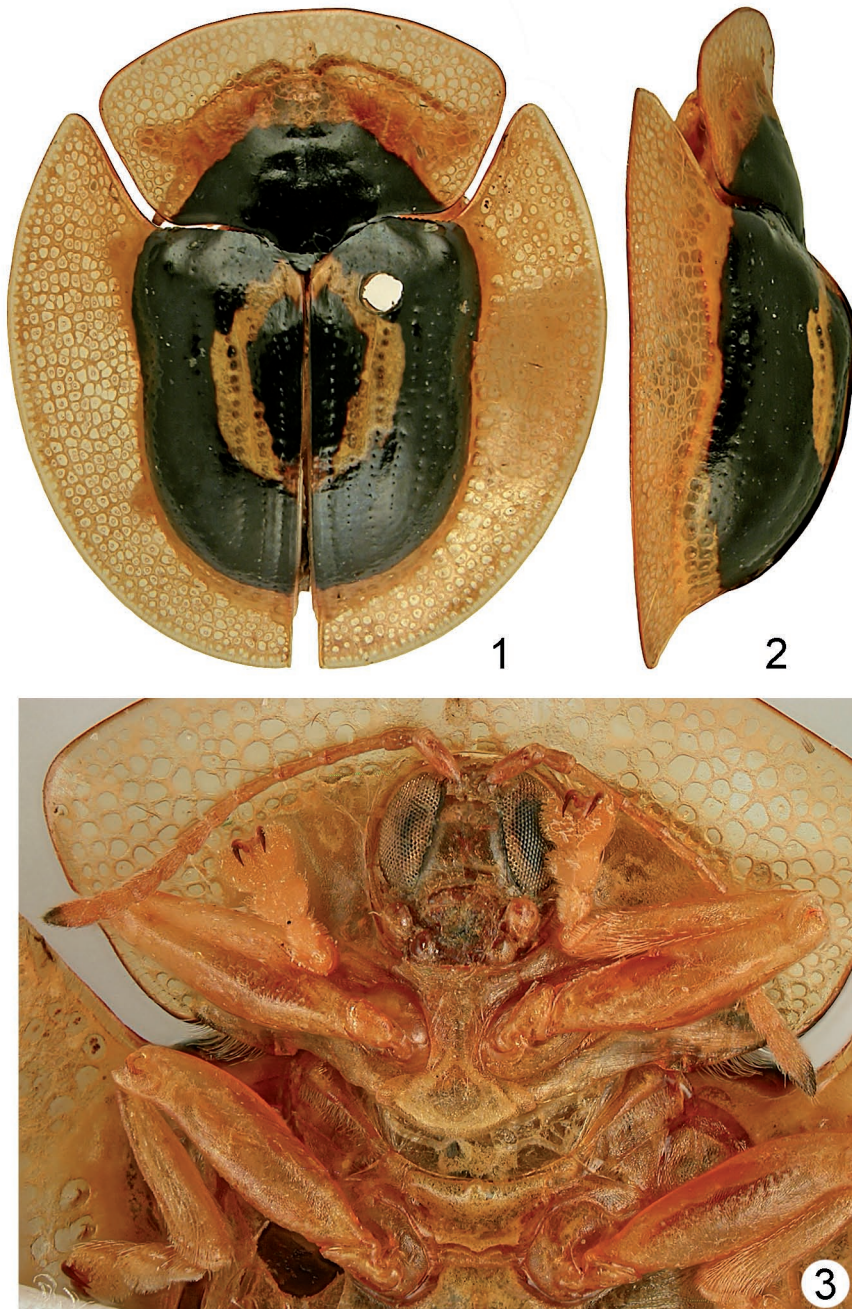
The name is dedicated to C.W. and L.B. O'BRIEN, collectors of this new species.

TYPE MATERIAL

Holotype female: "BRAZIL, Rondonia, / 62 km SW.Ariquemes, / Fzda. Rancho Grande, / 9-XI-1994, / C. W. & L. B. O'Brien" (preserved in Monte L. Bean Life Science Museum, Brigham Young University, Provo, USA).

DIAGNOSIS

The new species belongs to the group 1 of *Plagiometriona* s. str. in SPAETH's (1937) system) characterized by humeral angles strongly protruding anterad in right angle along pronotum, inner margin of epipleuron not reaching to apex of elytra, the third antennomere two times longer than the second and distinctly longer than first, clypeus slightly longer than wide with mid furrow, and elytra regularly convex without postscutellar tubercle. The group includes nine species, however, only *Plagiometriona phoebe* (BOHEMAN, 1855) and *Plagiometriona centromaculata* SEKERKA & WINDSOR, 2012 has similar pattern – black elytral disc with yellow ring and black central spot. *Plagiometriona phoebe* is widely distributed through northern South America, mainly in Amazon basin and occasionally reaching Andean foothills in southeast Colombia and Ecuador while *P. centromaculata* is restricted to south Bolivian Andean foothills. *Plagiometriona obrienorum* distinctly differs from both congeners in narrow, elongate



1-3. *Plagiometriona obrienorum* n. sp.: 1 – dorsal, 2 – lateral, 3 – head and prosternum

central spot on elytra, serrate anterolateral border of the yellow ring, and distinctly finer elytral punctation, especially on slope.

DESCRIPTION

Measurements: length of body: 7.8 mm, width of body: 7.0 mm, length of pronotum: 2.8 mm, width of pronotum: 4.8 mm, length/width of body ratio: 1.06, width/length of pronotum ratio: 1.71. Body almost circular.

Pronotum yellow with large trapezoidal basal spot covering almost whole disc. Scutellum black. Elytra yellow with black outer ring and central spot. Black ring extends from external third of 3rd interval to 9th rows of punctures laterally, to 7th row of punctures apically and basally to basal margin up to anterolateral margins of scutellum. Ultimate interval mostly yellow only behind humerus black slightly extending behind 9th row. Central spot narrow, elongate, widest in anterior third then distinctly narrowed posterad, with semi-diameter the width of two sutural intervals. Underside uniformly yellow including legs and antennae, only apical antennomere black with yellowish tip (Fig. 1).

Pronotum reversely trapezial, with anterior and basal corners rounded, maximum width in anterior corners, and anterior margin regularly inflexed and moderately projecting forward. Disc of pronotum moderately convex, smooth, shiny, impunctate without basal impression. Explanate margin broad, subhorizontal, more or less distinctly separated from disc by impressed line, and with honeycomb structure. Anterior margin moderately bent upwards and canaliculate. Whole surface of pronotum impunctate, polished, smooth, shiny and micro-reticulate.

Scutellum triangular, smooth, shiny, and microreticulate. Base of elytra moderately wider than base of pronotum (distinctly less wider than in both relatives). Basal margin moderately sinuate and obtusely serrate. Humeral angles subangulate and strongly protruding anterad in obtuse angle along pronotal sides and reaching almost to anterior corners of pronotum. Disc regularly convex without impression. Humeral calli normal, not protruding. Punctation regular, moderately dense, in anterior half moderately coarse in posterior half gradually finer thus on slope very fine. Punctures mostly regular in size, partly irregularly distributed in rows with interspaces varying from much narrower than puncture diameter to as wide as puncture diameter. Punctures gradually coarser laterally. Intervals 2-4 broad, four to five times wider than puncture diameter, lateral intervals twice to thrice wider than puncturediameter. Scutellar row distinct, short, stretching from base of scutellum to anterior fourth of the central black spot. Submarginal row distinct in whole length, its punctures approximately twice coarser than those in remaining rows. Marginal row distinct in whole length, without distinct vacancy, its punctures as coarse as punctures on the disc and less coarse than punctures in submarginal row (Fig. 2). Explanate margin broad, subhorizontal, and with honeycomb structure. Whole surface of elytra smooth and shiny, disc polished, explanate margin micro-reticulate. Apex of elytral epipleura bare.

Eyes large, occupy almost whole sides of head, gena very short. Clypeal lines very fine, visible only as basal rudiments. Clypeus 1.2 times as wide as long, slightly convex, smooth, impunctate, and micro-reticulate with shallow medial furrow. Labrum

transverse, broad, and moderately emarginate to 1/5 length, not carinate. Last segment of labial palpi globular. Antennae long, filiform, with six basal glabrous and five terminal dull segments. Length ratio of antennomeres: 100:51:104:75:72:57:57:54:61:61:110. Third antennomere twice longer than second and 1.4 times as long as segment fourth. Ninth and tenth antennomeres subequal in length. Prosternal collar normal, slightly impressed on sides. Prosternal process moderately broad, moderately constricted around midlength, and strongly expanding apically. Intercoxal part with deep elongate sulcus, apex rhomboidal and slightly convex. Whole prosternal structure sparsely pubescent and micro-reticulate (Fig.3).

Legs normal, not modified. Claws divergent, all appendiculate with moderate tooth and micropectinate.

HOST PLANT

Unknown.

DISTRIBUTION

Brazil, Rondonia State. The locus typicus is placed in the northern part of the state, 62 km SW of Ariquemes city.

ACKNOWLEDGEMENTS

We would like to thank S. CLARK of the Monte L. Bean Life Science Museum, Provo, USA for the loan of the specimen. This paper was supported by the University of Wrocław, project 1018/KBiTE/2012.

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