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A NEW SPECIES OF *PLATYDEMA* LAPORTE AND BRULLE FROM PERU, WITH NOTES ON SIMILAR SPECIES (COLEOPTERA: TENEBRIONIDAE)

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ABSTRACT

A new species of *Platydema* Laporte and Brullé, *P. xanthostigmatum* from Peru, is described and compared to other Western Hemisphere species with frontal horns in the male. *Platydema hondurense* Champion is reduced to a synonym of *P. erythrocerum* Laporte and Brullé and *P. rodriguezi* Champion is reduced to a synonym of *P. undatum* Chevrolat. A lectotype is designated for *P. undatum*. Distribution of those species and *P. erotyloides* Chevrolat is discussed.

The genus *Platydema* Laporte and Brullé is worldwide in distribution with at least 281 described species (Gebien 1940:530). In my (Triplehorn 1965) revision of the genus for America north of Mexico, I reported 19 species, three of which were new. Gebien (1940) reported 54 species from Central America and 55 for South America.

In the intervening years, I have studied most of the available types and have looked at hundreds of *Platydema* in institutions around the world. As expected, there is a lot of synonymy, a number of misplaced species, missing types and a number of undescribed species. I am certain that there are more than 130 species of *Platydema* in the Western Hemisphere.

Sexual dimorphism, in which the male has well-developed frontal horns and the female only tubercles, occurs in only seven Western Hemisphere species of *Platydema*. Three of those, *P. excavatum* (Say), *P. cyanescens* Laporte and Brullé, and *P. teleops* Triplehorn, belong to the group with shiny integument and, according to my concept of the classification, are not closely related to those with dull integument (see Triplehorn 1965:391). The four described horned species with dull integument will be discussed after the description of the following new species.

*Platydema xanthostigmatum* Triplehorn, new species

Fig. 1

Holotype, male, allotype female: PERU. Tambopata Prov., 15 km NE Pto. Maldonado, 13–17 June, 1989, 200 m, J. Ashe, R. Leschen, ex Xylaria, deposited in Snow Entomological Museum, University of Kansas, Lawrence.

Paratypes: 11 males, 11 females, same data as holotype; 1 female, Tambopata Prov., Madre de Dios, 15 km NE Pto. Maldonado Reserva, Cuzco Amazonico, 12°35'S, 69°03'W, 200 m, Quebrada Trail, 19 July, 1989, J. Ashe, R. Leschen, beating. Paratypes in Snow Entomological Museum and The Ohio State University Insect Collection.
Fig. 1. *Platydemia xanthostigmatum*, male habitus.
Recognition. This species is distinguished from all other Western Hemisphere Platydema by the stout deflexed frontal horns and median clypeal tubercle of the male and the nine small yellowish maculae on each elytron.

Description. Holotype, male. Length: 4.0 mm; width: 2.5 mm. Body broadly oval, moderately convex, black, dull in luster. Head with clypeal margin truncate, genal margin straight from clypeus to eyes, diverging from abrupt angle with clypeal margin; clypeus triangular, coarsely and rugosely punctured, with medial blunt tubercle on anterior margin; a pair of stout, cylindrical, slightly deflexed horns arising at inner margins of eyes, their distal halves bearing dense golden setae, especially ventrally; an abrupt, deep medial excavation between horns involving most of frons, with sharp margin connecting bases of horns and forming dorsal limits of excavation, excavation shiny and impunctate; eyes large, reniform, ventral lobe larger than dorsal; eyes separated ventrally by about diameter of one eye; mouthparts yellowish-brown, terminal segment of maxillary palpus broadly triangular; antennae with basal two and apex of terminal antennomere yellowish, remaining ones piceous. Pronotum almost 2.5 × as wide as long, lateral margins strongly rounded from base to apex, widest near base, apical margin subtruncate medially; apical and basal angles rounded; basal margin strongly bisinuate; surface shallowly, finely, not very densely punctate medially, lateral third with deep, slightly larger punctures. Elytra punctate-striate with fine but well-defined punctures, intervals flat, impunctate but finely microreticulate. Each elytron with nine small yellowish maculae: four basal, arranged in a semicircle, four in zigzag row behind middle and one subterminal. Each macula about diameter of one elytral interval. Ventral surface dark reddish-brown (including legs and epipleura); propleura smooth, impunctate, with several vague longitudinal wrinkles; prosternum finely granulate, prosternal process horizontal, apex thin and prominent; mesosternum strongly V-shaped anteriorly, sides raised and reflexed, surface finely and sparsely punctured; metasternum impunctate medially with a few scattered punctures laterally; densely setose medially; abdominal sterna finely and densely punctured, each puncture bearing a short appressed cinereous seta. Aedeagus as in Fig. 2, basal portion (in dorsal view) parallel-sided from apex almost to middle, laterally expanded to rounded base; fused lateral lobes elongate-triangular, with a few short setae at apex.

Allotype, female. Length: 3.8 mm; width: 2.4 mm. Coloration and punctation identical to male except for head. Head of female lacks frontal horns but has small tubercles where horns of male are located and lacks deep excavation between tubercles; clypeus trapezoidal, entire surface rugosely punctured.

Variation. Only those males with the most developed frontal horns have the clypeus triangular. Six specimens of the type series have the horns greatly reduced (by about half) and in these, the clypeus is more trapezoidal as in the female. This is the only species of Platydema in which I have seen setae on the fused lateral lobes of the aedeagus.

Platydema erythrocerum Laporte and Brullé

Platydema erythrocerum Laporte and Brullé 1831:355.
Platydema erythrocerum Laporte and Brullé 1870:382; Triplehorn 1965:425.
Neomida flavicornis Motschulsky 1873:479 (placed in synonymy by Triplehorn 1965:425).

This is the only unicolorous, dull species of Platydema with frontal horns I have encountered in the Western Hemisphere. As usual, there is variation in male horn development; females have blunt but prominent tubercles instead of horns.

This species is not uncommon in the southeastern United States, ranging as far north as New York and as far west as Texas, Oklahoma and Kansas. I
can now report the first Mexican records: Mexico, Hidalgo, Grutas Tolantongo, 29.7 km. NW Carbonal, 13 July, 1990, 1230 m, J. S. Ashe, K. J. Ahn, R. Leschen, ex rotting *Pleurotus* (8 males, 8 females, Snow Entomological Museum, Lawrence, KS); Mexico, Chiapas, 5 mi. SW El Bosque, 6 July, 1969, Campbell & Bright (7 males, 5 females, Canadian National Collection, Ottawa);
Mexico, Chiapas, 6 mi. E San Cristóbal de las Casas, 2 May, 1969, J. E. H. Martin (1 female, Canadian National Collection, Ottawa).

The type of *P. erythrocerum* was not seen. Champion’s description of *P. hondurensense* was based on two specimens (male and female) from Rio Sarstoon, British Honduras (now Belize). When I studied the types (in The Natural History Museum, London), I noticed the strong resemblance to the familiar *P. erythrocerum* but without dissecting genitalia was reluctant to synonymize Champion’s name until I saw those from Mexico. My conclusion is reflected in the above synonymy.

**Platydema undatum** Chevrolat

*Platydema undatum* Chevrolat 1878:194; Champion 1886:185.

*Platydema rodriguezi* Champion 1886:185, pl. 8, Fig. 15, (new synonymy).

This species is variable in color. Some specimens are dark with light markings and others light with dark markings. In the more common light form, there is a broad transverse wavy band slightly behind the middle, with a narrower transverse zigzag band between it and the base and another narrow transverse band across apical ¼. Sometimes the bands coalesce so that the usual yellowish ground color is reduced to a series of 3–5 blotches. It is to this latter phase that Champion assigned the name *P. rodriguezi*.

A series (17 specimens) from El Salvador (see below) demonstrated the variability, ranging from the typical banded phase to the very dark, spotted phase. I believe that *P. rodriguezi* is merely a very dark phase of *P. undatum* and therefore place it in synonymy.

Specimens examined. 65 from the following localities: BELIZE (Belize). COLOMBIA (Rio Frio). COSTA RICA (Hamburg Farm, Reventazon, Ebene Limon; Guanacaste Prov., 6 mi. SW Cañas, Taboga). EL SALVADOR (Quezaltepeque). MEXICO (San Luis Potosi, Tamazunchale; 11.4 km. S Tamazunchale, Hwy. 85; 3 km. E Xilitla; 15.2 km. N Jct. Hwy 120 and 85; 8 mi. N Huichihuayan; Chiapas, 2 mi. NE Bochil; 5 mi. SW El Bosque; Veracruz, Cordoba; Jalapa; Omealca; Tierra Blanca). PANAMA (Panamá Prov., Chica; Barro Colorado Island, C.Z.)

Champion (1886) reported the species from MEXICO (Orizaba, Jalapa, Esperanza, Veracruz); BELIZE (Belize); GUATEMALA (Balheu); NICARAGUA (Chontales); PANAMA (Volcan de Chiriqui). All specimens I have examined were collected between January and July. The only host data accompany those from San Luis Potosi, Mexico: “ex *Auricularia delicata*” and ex "fungusy" log.

The type of *P. undatum* is a unique female in the Chevrolat collection (Museum National d’Histoire Naturelle, Paris) labelled “Mexico.” Chevrolat mentioned that the description was based on three specimens but only the one still remains. The type series (13 specimens) of *P. rodriguezi* (The Natural History Museum, London) is from Guatemala (Cerro Zunil and Capetillo). I have selected and so labelled the specimen from Capetillo figured by Champion as lectotype.

**Platydema erotyloides** Chevrolat

*Platydema erotyloides* Chevrolat 1878:243.

*Platydema ornatum* Chevrolat 1878:209 (not *P. ornatum* Chevrolat 1877:186;
Chevrolat recognized his own homonym and corrected it with a replacement name.

This handsome little beetle is very constant in coloration: ground color yellowish; pronotum with seven brownish blotches (sometimes joined); elytra with suture and a transverse, zigzag reddish band (bordered in dark brown) joined in a cruciform configuration; base narrowly bordered with black and a bold U- or W-shaped blotch extending caudad (this is perhaps the best color character); a thin, wavy dark band on apical ¼. Specimens are 3.0 to 3.5 mm in length. The frontal horns of the male are not well developed, usually merely tubercles, and females lack even traces of frontal tubercles.

Specimens examined. 85 from the following localities: BRAZIL (Bahia, Salobro; Espirito Santo, Linhares; Maranhão, Igarape Gurupi; Pará, Benevides; Pará, Taperinha; Pará, Utinga, nr. Belém; Pará, Santarém; Amazonas, Rio Madeira; São Paulo, Fazenda Campinas, Mogi Guacu; São Paulo, Rio Piracicaba). PERU (Tambopata Prov., Madre de Dios, 15 km N. Puerto Maldonado; Loreto, Esticón, Rio Ampiyacu; Loreto, 15 km from Ucayali on Rio Calleria; Junín, San Ramon de Pangoa, 40 km SE Satipo). VENEZUELA (Aragua Par. Nac. Henri Pittier, Rancho Grande to Ocumare; Suapure, Caura River).

Host data on specimens from Puerto Maldonado, Peru and Venezuela include: "ex Daldinia," "ex Favolus hexapondlus," "ex Auricularia sp.," "ex cornstone polypore," "ex Sporosis-like fungi," "ex misc. gilled fungi." Records indicate that adults are found throughout the year.

This species was described from Brazil ("Amazona"). The type specimen still stands under the name P. ornatum in the Chevrolat collection (Museum National d'Histoire Naturelle, Paris).

ACKNOWLEDGMENTS

I am indebted to James S. Ashe and Richard Leschen for providing the specimens which stimulated me to prepare this paper. Not only did they collect all of the known specimens of a new species, they also collected fine series of all of the others with which I was dealing. I also thank Jason Fairchild for preparing the habitus illustration and Traci Temple for the genitalia figures. Locality records are based on specimens in more than 20 institutions; to those who loaned them to me go my sincere thanks.

LITERATURE CITED


BOOK REVIEW


This important volume is most appropriately dedicated to Louis Péringuey, the pioneer southern African coleopterist, and was written for the amateur and specialist alike. Péringuey’s treatment of the southern African cetoniine fauna at the turn of the century was the last comprehensive work on this colorful group. The classification of the cetonines, like many other insects popular with collectors, has been plagued by amateurish picture books which lack keys and contain descriptions of questionable new taxa. At last, we have a book which attempts to cut through some of the confusion, and admirably so.

“Fruit Chafers of Southern Africa” lacks an abstract, which is unfortunate when considering the number of taxonomic changes that are proposed in the work. One species is described as new. Ten taxa are given new status; seven genera are reduced to the rank of subgenera; three species are reduced to the rank of subspecies. Thirty-one new combinations are proposed. One genus is redefined while another is removed from synonymy. Lecto- and paralectotypes are designed for 24 valid species and their synonyms.

The introduction is written with style and humor. The descriptive notes on the authors that appear on the back dust cover are incredibly accurate. The remarks of Holm and Marais regarding unprofessionalism on the part of some collectors (e.g., the retention of holotypes in private collections) and dealers are well taken. An excellent schematic diagram of the dorsal and ventral features of the Cetoniinae is presented. A very useful section is included on the collection of cetoniines, including several trapping techniques.

The classification use in the work is somewhat conservative in relation to that proposed by Krikken. It is unfortunate that Holm and Marais do not discuss their rationale for the higher classification presented in the work further, but this does not detract from the volume’s intended purpose as a manual for identification. The authors recognize two tribes in the African Cetoniinae, the Cetoniini and the Cremastocheilini. Only the Cetoniini are covered in this work. The tribe Cetoniini of the southern Afrotropical region is further subdivided into the subtribes Xiphoscelidina, Goliathina, Coryphocerina, Cetonina, and Diplognathina and includes 70 genera and 173 species and subspecies.

Keys to the tribes, subtribes, genera, and species are supported by a wealth of illustrations, but one still must exercise caution, “It in spite of all your efforts to key out a taxon you do not succeed, you either have a new species (not likely) or you are stupid (quite likely) or our keys are stupid (very likely),” the authors warn. I was able to use most of the keys with very little difficulty. Fortunately, most of the species determinations may be readily checked against the wonderfully executed line drawings and color plates.

Most species are illustrated with distribution maps, line drawings of the dorsal habitus, dorsal sculpturing, ventral characters, male genitalia, and legs. Notes include a species diagnosis and known bionomics. Locations of types, when known, are also given. Unfortunately, the locality records and disposition of the material examined (other than types) were not included.

Diplognatha silicea MacLeay is treated as a subspecies of D. gagates (Forster) (not Foster, as stated in the text), apparently without the benefit of examining all of the