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STUDIES IN PHALERIA (COLEOPTERA: TENEBRIONIDAE): LECTOTYPE DESIGNATION FOR P. GUATEMALENSIS CHAMPION AND A NEW SPECIES FROM THE WEST COAST OF MEXICO

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ABSTRACT

A new species of Phaleria, P. championi, is described, and a lectotype is designated for P. guatemalensis Champion. P. championi shares unusually large interneural punctures with P. guatemalensis, but differs in ventral eye size, elytral microsculpture, epipleural setal development, abdominal setal patches among the males, and other more subtle characteristics. Both species occur along the west coast of Mexico and Central America; they appear to be allopatric, with P. championi occurring in the North and P. guatemalensis in the South.

Phaleria guatemalensis Champion (1886, p. 218, Tab. X, fig. 1) was described from a series collected at Champerico, Guatemala. Champion characterized the species as having the elytra very coarsely punctate-striate, an unusual character in Phaleria, and he commented on the constant coloration of the elytra, consisting of a "large common broad black or piceous patch about the middle extending more or less broadly to the base". In the "many examples" he examined, only one had the common black patch not extending to the base.

In 1893 (p. 541), Champion reported receiving P. guatemalensis "sent in abundance from Mazatlan, Mexico". He noted that the "Mexican specimens differ from those from Guatemala in having the elytral markings entirely obliterated, or, at most, represented by a post-median sutural streak and a small discoidal spot".

All of the specimens mentioned by Champion were mounted in the time-honored European fashion, glued dorsal side up to small cards, thus effectively obscuring the entire ventral surface. As we pointed out in an earlier paper (Triplehorn and Watrous 1979), some of the best taxonomic characters in Phaleria are ventral ones. We also urged that caution be exercised in the use of coloration as a taxonomic character in the genus.

Specimens from several localities on the west coast of Mexico (fig. 15) indicate that there are two similar but quite different species, both having unusually large interneural punctures. Through the courtesy of M. J. D. Brendell (British Museum, Natural History), we were able to borrow 10 syntypes of P. guatemalensis, plus 3 from the Mazatlan series, thus enabling us to establish the identity of P. guatemalensis and to confidently describe the following new species. We take pleasure in dedicating it to the memory of George C. Champion, the distinguished British Coleopterist, whose work on Neotropical Tenebrionidae stands as a monument in the history of Coleoptera systematics.
Phaleria championi Triplehorn and Watrous, new species

Description: Holotype, male (genitalia dissected). Habitus as in fig. 13. Elongate-oval, moderately convex, light brown dorsally. Head finely alutaceous, finely and densely punctured on frons, punctures abruptly coarser on vertex and much finer and sparser along epistomal margin; anterior clypeal margin subtruncate; eyes large, reniform, separated ventrally by a distance greater than the ventral diameter of one eye, medial margin about in line with lateral margins of maxillary cardines (as in fig. 2). Pronotum twice as broad as long, lateral margins strongly and evenly convergent from base to apex, entire perimeter with fine but distinct marginal bead; apex shallowly emarginate, base feebly bisinuate, almost truncate; apical angles obtuse, not prominent, basal angles nearly right; surface minutely alutaceous, very finely and sparsely, but distinctly punctate; hypomera concolorous with dorsum, shiny, glabrous; prosternum strongly beaded along anterior margin, with 6 long, conspicuous, golden setae arising immediately behind marginal bead and in line parallel to the bead; prosternal process shiny, glabrous, its apex horizontal. Metasternum and abdominal sterna dark brown, shiny, with widely spaced, small, setigerous punctures; pleural elements of meso- and metathorax and legs concolorous with dorsum. Scutellum broadly triangular, feebly alutaceous with 12 distinct punctures, all located on basal half. Elytra with a thin, dark brown sutural stripe from scutellum nearly to apex, stripe expanded slightly behind middle to involve entire first interval, then narrowing again to involve only the edges of the suture; a dark brown, subquadrate spot situated on the 4th interval on each side of suture and about in line with expansion of sutural stripe; interneurs with coarse punctures in grooves on basal 2/3 of elytra, gradually becoming smaller apically; intervals slightly convex, minutely alutaceous and extremely finely punctured; epipleura with conspicuous muricate punctures, each of which bears a fine golden seta which is directed laterally, setae visible in dorsal view as a distinct fringe (as in fig. 5). Aedeagus as in figure 7. Measurements: Length: 5.2 mm; width 2.6 mm.

Variation: The sexes are indistinguishable externally except that the females tend to be slightly larger. Color patterns vary from individuals in which the two elytral spots are entirely absent to a few in which the expanded portion of the sutural dark stripe joins the spots on the 4th interval to form a zigzag configuration. In all specimens examined, the sutural dark stripe is present. In the type series (333 specimens) 18% had bold discal spots, 35% had at least an indication of the spots, and 47% had no trace of them. Measurements: Length: 4.8-6.4 mm; width: 2.6-3.2 mm.

Types: Holotype (♂) and 332 paratypes: Mexico, Sinaloa, Las Animas Beach, near Topolobampo, 2 September, 1978, R. E. Woodruff and B. K. Dozier, on dunes at
Figs. 3-6, Elytral microsculpture: 3, *P. championi*; 4, *P. guatemalensis*. Figs. 5-6, right elytron showing interneural punctures and marginal setae: 5, *P. championi*; 6, *P. guatemalensis*.

night. Holotype deposited in Museum of Comparative Zoology, Harvard University; paratypes in British Museum (Natural History), London; Museum National d'Histoire Naturelle, Paris; United States National Museum of Natural History, Washington, D.C.; American Museum of Natural History, New York; Field Museum of Natural History, Chicago; Museum of Comparative Zoology, Cambridge, Massachusetts; California Academy of Sciences, San Francisco; Florida State Collection of Arthropods, Gainesville; Canadian National Collection, Ottawa; Ohio State University Collection of Insects and Spiders. Other specimens examined: (3) Mexico, Sonora, Huatabampito, 22 April, 1974, D. Giuliani (California Insect Survey Collection); (15) Mexico, Nayarit, San Blas, 12 June, 1955, R. B. and J. M. Selander (U.S. National Museum); (22) Same locality, 15 June, 1955, B. Malkin (California Insect Survey Collection); (1) Same locality, 24-26 June, 1961, Howden &
Figs. 7-10, Aedeagi: 7-8, P. championi, dorsal and lateral aspects; 9-10, P. guatemalensis, dorsal and lateral aspects.

Discussion: Phaleria championi is most similar to P. guatemalensis Champion. As previously mentioned, specimens of P. championi were determined by Champion to be conspecific with P. guatemalensis. Because of the large interneural punctures, we initially made the same error. P. championi differs from P. guatemalensis in several very diagnostic characters and many more subtle ones. The conspicuous patch of hairs on the basal abdominal sternum of the male P. guatemalensis (not present in either sex of P. championi) will positively separate the two species. Among the species we have studied, only P. debilis LeConte shares this sexually dimorphic character. P. debilis is also found along the west coast of Mexico but is not likely to be confused with P. guatemalensis since it lacks the large interneural punctures. The eyes of P. guatemalensis (fig. 1) are slightly closer together ventrally than those of P. championi (fig. 2); the inner margin clearly extends inside the base of the maxillary cardo and more closely approaches the submentum. The laterally-projecting epipleural hairs, so conspicuous in P. championi (fig. 5), are short and scarcely visible from above in P. guatemalensis (fig. 6). The interneural punctures of P. guatemalensis (fig. 6) are slightly coarser than those of P. championi (fig. 5) and P.
guatemalensis (fig. 4) lacks the fine microsculpture of P. championi (fig. 3) which causes the latter to appear duller in luster. The dark elements of the color pattern in P. guatemalensis appear to be more extensive (figs. 11, 12) than in P. championi (figs. 13, 14) but, as we stated earlier, reliance on coloration in Phaleria is to be avoided. Finally, the apical portion (fused parameres) of the aedeagus is more parallel-sided and is longer in relation to the width in P. championi (figs. 7, 8) compared to the more triangular shape in P. guatemalensis (figs. 9, 10). Both species have the metathoracic wings fully developed.
Phaleria guatemalensis Champion

Phaleria guatemalensis Champion, 1886:218, Tab. X, fig. 1

P. guatemalensis Champion is distinguished from all Phaleria except P. championi by the large interneural punctures (figs. 6, 11, 12), and is distinguished from P. championi by the reduced microsculpture and epipleural setae of the elytra (figs. 4, 6) and by the conspicuous patch of setae on the basal abdominal sternum of the males.

We hereby designate as the lectotype of Phaleria guatemalensis Champion, a specimen (male) in the British Museum (Natural History) bearing the following labels: 1. round blue syntype label; 2. round red type label; 3. Champerico, Guatemala, Champion; 4. Phaleria guatemalensis Ch. (hand written); 5. Type (machine printed); 6. sp. figured; 7. Godman-Salvin Coll., Biol. Centr.-Amer.; 8. our lectotype designation label. Just above the last label is a plastic microvial containing the dissected male genitalia in glycerine.

The selection of this particular specimen as lectotype is appropriate since it is the one from which the illustration accompanying the original description was prepared.

P. guatemalensis remains very rare in collections. In addition to the type series from Champerico, Guatemala we saw only the following: 2 (♂, ♀) 3 miles east of Salina Cruz, Oaxaca, Mexico, 12 August, 1963, F. D. Parker & L. A. Stange (University of California at Davis); 14 Iguala, Guerrero, Mexico, 2400 , 8 August, 1954, J. G. Chillcott (Canadian National Collection). If the latter series is indeed from Guerrero, it is almost certainly from...
the coast, very likely the Acapulco area; Iguala is on the main road between Mexico City and Acapulco. The "Iguala" series fits the concept of *P. guatemalensis* in every way (including genitalia) except coloration. They are much lighter (teneral?) with the common broad, dark elytral patch much reduced or entirely absent and not attaining the elytral base. The two from Salina Cruz also have reduced elytral maculation.

Further collecting is needed between Manzanillo and Salina Cruz (more than 1,000 km) to establish the distributional limits of the two species and to interpret the discordant color variation in *P. guatemalensis*.

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