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Revision of the genus *Crambelea* SPAETH, 1913 (Coleoptera: Chrysomelidae: Cassidinae: Cassidini)

LECH BOROWIEC

Department of Biodiversity and Evolutionary Taxonomy, Zoological Institute, University of Wrocław,
Przybyszewskiego 63/77, 51-148 Wrocław, Poland, e-mail: cassidae@biol.uni.wroc.pl

ABSTRACT. The genus *Crambelea* SPAETH, 1913 is revised. It comprises only two species distributed in Brazil and Paraguay. *C. illudens* (BOHEMAN, 1854) is redescribed and a new species *C. minuta* is described from Paraguay.

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

BOHEMAN (1854) described from Brazil *Batonota illudens*, and in 1855 another species from Brazil *Coptocyclus intumida*. SPAETH (1909) synonymized both taxa and placed in the genus *Coptocyclus* CHEVROLAT, 1837. In large paper on several new genera of New World Cassidinae SPAETH (1913) proposed for *Batonota illudens* (BOH.) a monotypic genus *Crambelea*. For many years the genus and its type species were known only from original descriptions with “Brazil” as distribution data without detailed locality, although type specimen of *Coptocyclus intumida* has more precise locality label “Minas Gerais” province of Brazil. Recently, BOROWIEC (1996) published first precise locality for *Crambelea illudens*, Leopoldo Bulhões in Goiás province of Brazil. In materials studied recently I found two specimens of the genus *Crambelea* distinct from the type species and collected generally in “Paraguay”. Its description as a new species with redescription of *Crambelea illudens* is given below.

Genus: *Crambelea* SPAETH, 1913

Crambelea SPAETH, 1913: 143 (type species: *Batonota illudens* BOHEMAN, 1854, by monotypy), 1914: 122; HINCKS, 1952: 341; SEENO and WILCOX, 1982: 178; BOROWIEC, 1999: 365.

Moderately large cassids with body length 6.9-8.4 mm. Body oval in outline with maximum width in 1/3 to half length, elytra rounded apically. Pronotum reversely trapezoidal with maximum width before the middle but without anterior and basal corners, sides rounded. Disc of pronotum indistinctly bordered from explanate margin, without special structure, shiny. Explanate margin impunctate, smooth and shiny, transparent with honeycomb structure. Venter of pronotum without antennal grooves. Base of elytra much wider than pronotum, disc strongly convex, gibbous, without distinct impressions. Punctuation of disc irregular, coarse, double but sparse, large punctures group in basal triangle, along suture, and in dark spots on sides of disc. Explanate margin strongly declivous, moderately wide, approximately four times narrower than disc. Surface of explanate margin very coarsely punctate, punctures as coarse as or slightly coarser than large punctures of disc. Elytral edge doubly or simply marginate. Inner margin of elytral epipleura elevated. Apex of elytral epipleura with several short, erect setae, in old dried specimens appearing bare.

Eyes small, gena well marked, longer than length of apical segment of maxillary palpi. Clypeus forming an elevated triangle with short median sulcus, its surface without special sculpture, shiny (fig. 5). Clypeal sulci hardly visible as short, fine grooves at basal, clypeal corners, no frontoclypeal sulci. Labrum very broadly and shallowly emarginate. Last segment of maxillary palpi bulbous. Antennae moderately slim to slim, apical segments less than three times as long as wide, segment 3 much longer than segment 2. Five basal segments mostly glabrous and shiny and six apical segments densely pubescent.

Prosternal collar very short, shorter than half length of apical segment of maxillary palpi. Prosternal process narrow between coxae, flat or shallowly impressed, apex moderately expanded without impressions (fig. 5). Surface of prosternal process mostly smooth, shiny, with several small, setose punctures. Anterior margin of metasternum without row of punctures. Legs stout, tarsi broad, last segment not extending behind marginal setae of third segment. Claws simple (fig. 6)

Crambelea SPAETH belongs to the group of genera of the tribe Cassidini characterized by the following characters: claws simple, clypeal sulci hardly marked, venter of pronotum without antennal grooves, clypeus strongly elevated without impressions, prosternal process not carinate, elytra with marginal row, partly coarsely punctate, pronotum not sexually dimorphic, and antennae with four to five basal, glabrous segments. Such combination of characters *Crambelea* shares with only one genus, *Orexita* SPAETH, 1911. They can be distinguished by the key:

1. Antennae with four basal glabrous segments. Pronotum very broad, twice or more wider than long, widest in the middle, sides angulate. Body usually very broad and in most species depressed, occasionally angulate in profile but never gibbous. Punctuation of elytra more or less regular. Tarsi slim, last segment distinctly extending behind marginal setae of third segment. Large, length always above 8.5 mm, usually above 10 mm. From Nicaragua to S Brazil *Orexita*
- Antennae with five basal glabrous segments. Pronotum moderately broad, less than 1.6 times as wide as long, widest before the middle, sides narrowly rounded. Body

short oval, gibbous. Punctuation of marginalia coarser than punctuation of disc. Tarsi stout, last segment never extending behind marginal setae of third segment. Small, length always below 8.5 mm. Brazil and Paraguay..... *Crambelea*

DISTRIBUTION

Only two species distributed in provinces Goias and Minas Gerais of Brazil and in Paraguay.

Crambelea illudens (BOHEMAN, 1854)

Batonota illudens BOHEMAN, 1854: 182, 1856: 97, 1862: 242; WAGENER, 1881: 48.

Crambelea illudens: SPAETH, 1913 b: 144, 1914 g: 122; BLACKWELDER, 1946: 748; BOROWIEC, 1996: 168, 1999: 365.

Crambelea illuderis [sic]: HAITLINGER, 1993: 72 (phoretic mites).

Coptocycla intumida BOHEMAN, 1855: 410, 1856: 192, 1862: 465; GEMMINGER and HAROLD, 1876: 3670; SPAETH, 1909: 396 (as syn.).

MATERIAL EXAMINED

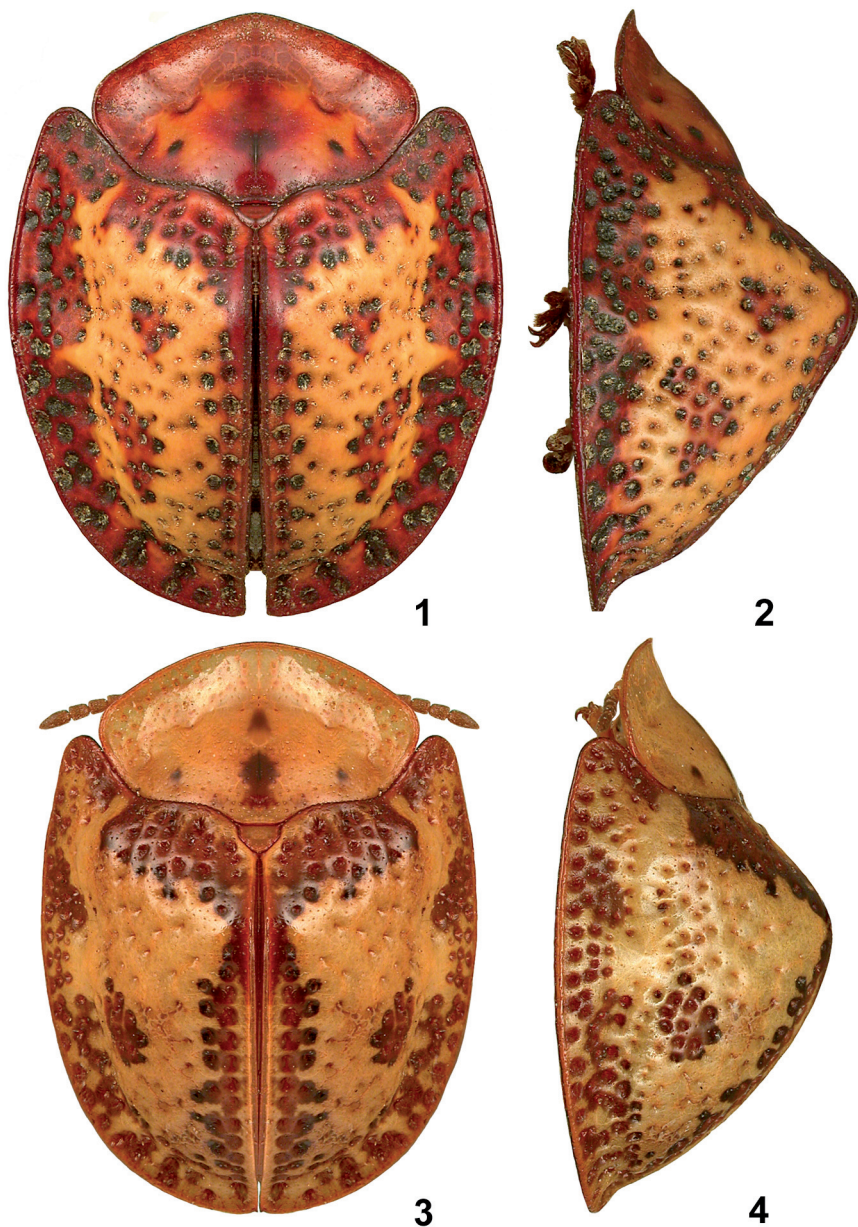
Type location of *Batonota illudens* unknown. Holotype of *Coptocycla intumida*: “Minas Gerae” “Bhn” “Type” (preserved in Naturhistoriska Riksmuseet Stockholm, Sweden); other material: “XII.1933, Goyaz, Leop-Bulhoes, Coll. R. Spitz”, 1 ex.; “Bresil”, 1 ex. (both preserved in Department of Biodiversity and Evolutionary Taxonomy, Zoological Institute, University of Wrocław, Wrocław, Poland).

REDESCRIPTION

Length 8.2-8.4 mm, width 6.6-6.9 mm, length of pronotum 2.8-2.9 mm, width of pronotum 4.5-4.6 mm, length/width ratio 1.22-1.24, width/length ratio of pronotum 1.55-1.64. Body short-oval, elytra widest in 2/5 length then moderately converging posterad, apex rounded (fig. 1).

Pronotum yellow to reddish yellow. Disc in the middle with reddish spot of various size and blurred borders, on sides with small, round black spot. Margin of border impression between disc and explanate margin of pronotum sometimes marked with black stripe. Elytra bicoloured: basal triangle, suture, explanate margin of elytra and two spots on each elytron reddish, other parts of disc yellow. In one of the examined specimens explanate margin of elytra is along border of disc yellow, externally yellowish-red and anterior spot of disc very small. Both coarse and small punctures of only disc or both disc and explanate margin with dark brown to black centre. Ventrites yellowish-red, border of thoracic plates and middle of anterior and posterior margins of abdominal sternites brown to black. Legs yellowish-red. Antennal segments 1-5 yellowish, remainder brown.

Elytra strongly convex in profile, almost tuberculate (fig. 2). Elytral edge doubly marginate. Antennae slim, segments 9 and 10 slightly more than twice as long as wide (fig. 7). Length ratio of antennal segments: 100:37:107:83:83:73:83:80:80:83:130, segment 3 approximately 2.9 times as long as segment 2 and approximately 1.3 times as long as segment 4. Other characters as in genus description.



1, 2. *Crambelea illudens* (Бон.): 1 – habitus dorsal, 2 – habitus lateral. 3, 4. *Crambelea minuta* n. sp.:
3 – habitus dorsal, 4 – habitus lateral (not in scale)

REMARKS

Location of type specimens of *Batonota illudens* is unknown. BOHEMAN (1854) cited collection of BUQUET as origin of the type specimen but during my stay in Paris I did not find any specimen of the genus. Good descriptions of both *Batonota illudens* and *Coptocyclus intumida*, especially large size noted by BOHEMAN (1854, 1855) suggested their conspecificity. I agree with SPAETH (1909) that both names are synonyms. Their distribution localities, provinces Minas Gerais and Goias, are neighbouring and in distance from Paraguay, the type locality of *Crambelea minuta* n. sp.

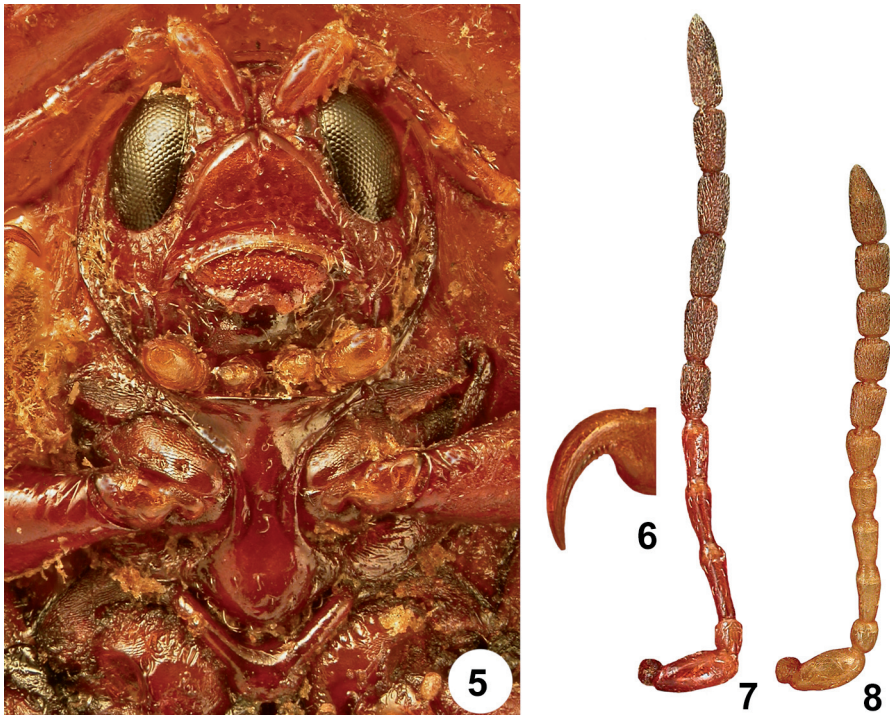
***Crambelea minuta* n. sp.**

MATERIAL EXAMINED

Holotype: "Paraguay, Fiebrig S.V."; paratype: the same data (both preserved in Department of Biodiversity and Evolutionary Taxonomy, Zoological Institute, University of Wrocław, Wrocław, Poland).

DESCRIPTION

Length 6.9-7.3 mm, width 5.2-5.3 mm, length of pronotum 2.5-2.6 mm, width of pronotum 3.8-3.9 mm, length/width ratio 1.33-1.38, width/length ratio of pronotum



5-7. *Crambelea illudens* (BOH.): 5 – head and prosternum, 6 – claw, 7 – antenna. 8. *Crambelea minuta* n. sp., antenna (not in scale)

1.50-1.52. Body short-oval, elytra widest approximately in middle then moderately converging posterad, apex rounded (fig. 3).

Pronotum yellow to honey yellow. Disc along middle with two brown spots, larger in front of scutellum and smaller anteriorly, on sides with very small, round black spot; anterior spot of disc sometimes obsolete. Elytra bicoloured: basal triangle, suture, and single spot on each elytron reddish to reddish brown, other part of disc and explanate margin yellow, sometimes explanate margin slightly darker, honey yellow. Only coarse punctures of both disc and explanate margin with brown centre. Ventrites yellowish-red, border of thoracic plates and middle of anterior and posterior margins of abdominal sternites brown to black. Legs yellowish. Antennae uniformly yellow.

Elytra strongly convex in profile, but no tuberculate (fig. 4). Elytral edge simply marginate. Antennae moderately slim, segments 9 and 10 approximately 1.3 times as long as wide (fig. 8). Length ratio of antennal segments: 100:42:78:72:61:61:64:61:64:65:167, segment 3 approximately 1.9 times as long as segment 2 and approximately 1.1 times as long as segment 4. Other characters as in genus description.

ETYMOLOGY

Named after its small size in comparison with its only congener *C. illudens* (BOH.).

COMMENTS

Both species of *Crambelea* at first glance look very similar but can be distinguished by the key:

1. Large, length above 8 mm. Elytra in profile very strongly convex, appear tuberculate. Elytral disc with two reddish spots on sides in anterolateral and posterolateral position. Elytral edge double marginate. Antennae long and slim, segments 9 and 10 approximately twice as long as wide *C. illudens*
- Small, length below 7.5 mm. Elytra in profile strongly convex but not appear tuberculate. Elytral disc with only single reddish spot on sides in posterolateral position. Elytral edge simple marginate. Antennae moderately long and slim, segments 9 and 10 approximately 1.3 times as long as wide *C. minuta*

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