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Redescription of two neglected species: *Charidotis obtusa* (BOH.) and *Ch. plicatula* BOH. (Coleoptera: Chrysomelidae: Cassidinae)

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ABSTRACT. *Charidotis obtusa* (BOHEMAN,1855) and *Charidotis plicatula* BOHEMAN, 1855 are redescribed. Both are unique with no close relatives.

Key words: entomology, taxonomy, redescription, Coleoptera, Chrysomelidae, Cassidinae, *Charidotis*, Neotropics.

The genus *Charidotis* comprises 160 species distributed in whole Neotropical Region (BOROWIEC 1999). They were perfectly keyed by SPAETH (1936 b). After this publication only five species were described (SPAETH 1939, ŚWIĘTOJAŃSKA and BOROWIEC 2000). During our stay at the Zoologisches Museum, Humboldt Universität, Berlin we found types of two neglected species described by BOHEMAN (1855) belonging to the genus *Charidotis* but not included in SPAETH's key. Both represent distinct species, their redescription is given below.

Charidotis obtusa (BOHEMAN, 1855)

Psalidonota obtusa BOHEMAN, 1855: 88, 1856: 157, 1862: 389; SPAETH, 1914: 134.
Coptocycla (*Psalidonota*) *obtusa*: SPAETH, 1936 a: 258.
Coptocycla obtusa: GEMMINGER &HAROLD, 1876: 3672; BLACKWELDER, 1946: 749.
Nuzonia obtusa: BOROWIEC, 1999: 396.
Charidotis obtusa: BOROWIEC, 2000: 59.

DIAGNOSIS

A very distinct species. Because of its large size it is at first glance more similar to the members of the genera *Coptocycla* CHEVR. and *Nuzonia* SP. than to the members of the genus *Charidotis* BOH. Using SPAETH's (1936 b) key it runs to couple 209, to group of species characterized by clypeus without deep sulci (54), body not wider than long (58), surface of clypeus smooth (74), antennae slim (78), clypeus only slightly longer than wide (90), elytral puncturation arranged in regular rows (96), clypeal plate yellow (118), explanate margin of elytra uniformly yellow (152), second elytral interval not convex (156), elytral disc without postscutellar tubercle (158), elytral outline almost circular (159), elytral disc without yellow band (182), antennal segment 6 not longer than segments 4 or 5 (202), pronotal disc uniformly yellow (203), elytral disc in posterior half distinctly punctate (208), and elytra uniformly yellow (209). The group comprises also *Ch. crenata* (BOH.), *Ch. glomerosa* BOH. and *Ch. rotundata* BOH. *Ch. crenata* and *Ch. rotundata* distinctly differ in small size (length below 5.5 mm, in *Ch. obtusa* 8 mm). *Ch. crenata* differs also in elytral disc with impunctate folds (no folds in *Ch. obtusa*), and *Ch. rotundata* differs in antennae with only three basal glabrous and eight distal segments pubescent (in *Ch. obtusa* five basal glabrous and six distal pubescent segments). *Ch. glomerosa* is only slightly smaller, with length of c. 7 mm, but differs in elongate-oval body (almost circular in *Ch. obtusa*), antennae with only five distal segments pubescent (six in *Ch. obtusa*), stout segments 8 and 9, almost equal in length and width (distinctly longer than wide in *Ch. obtusa*), and clypeal plate in basal half with distinct clypeal grooves (no grooves in *Ch. obtusa*).

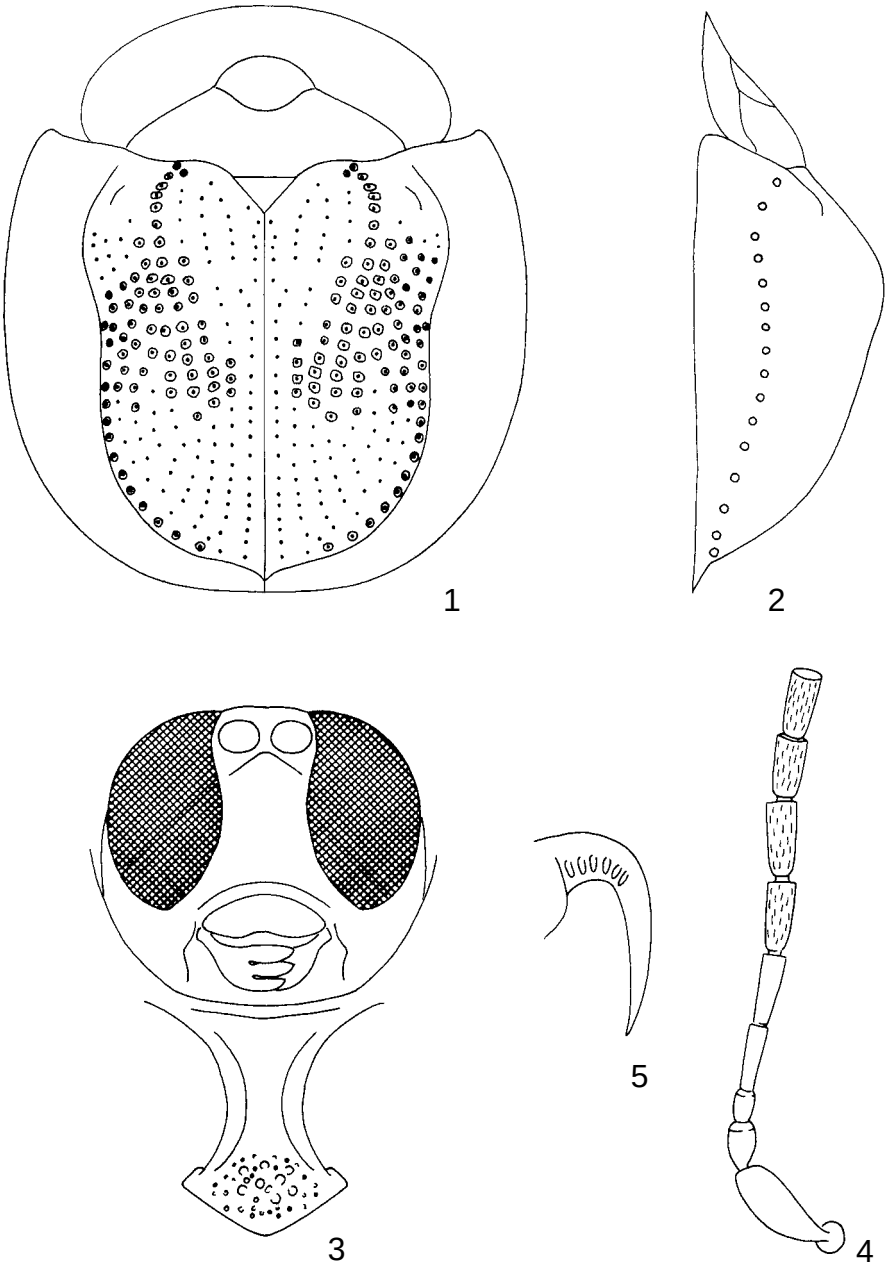
DESCRIPTION

Length: 8.0 mm, width: 7.0 mm, length of pronotum: 2.8 mm, width of pronotum: 4.8 mm, length/width ratio: 1.14, width/length ratio of pronotum: 1.71. Body almost circular (fig. 1).

Whole body yellow, including legs and antennal segments 1-9 (remaining broken).

Pronotum elliptical, with maximum width in the middle, sides broadly rounded. Disc regularly convex, without impressions, its surface smooth and shiny. Explanate margin broad, smooth and shiny.

Scutellum slightly pentagonal. Base of elytra wider than pronotum. Disc unevenly convex, with low gibbosity in postscutellar area (fig. 2), and with distinct principal impression between third and fifth elytral rows. Puncturation regular, moderately coarse in area close to principal impression and fine on central part of slope (but slightly coarser in its apical part) and in anterior part of first two rows. Punctures of marginal row very coarse c. thrice coarser than punctures in submarginal row. Intervals flat, in sutural part of disc and on slope c. four times wider than rows, in lateral part of disc close to principal impression c. as wide as rows, their surface smooth and shiny. Explanate margin broad, in the widest part



1-5. *Charidotis obtusa*: 1 – dorsal, 2 – lateral, 3 – head and prosternum, 4 – antenna, 5 – claw

slightly wider than half width of elytron, moderately declivous, its surface smooth and shiny. Apical part of margin and elytral epipleura with short setae.

Clypeus slightly wider than long, slightly convex, its surface smooth and shiny, clypeal lines distinct only in apical part. Labrum very shallowly emarginate. Prosternal process distinctly expanded apically, with elevated sides, and granulate and setose apical part (fig. 3). Antennae slim, pubescent from sixth segment, but sixth segment not longer than segments four and five, segment three very small, c. twice shorter than second, segments 8 and 9 more than twice longer than wide (fig. 4). Length ratio of antennal segments: 100:44:27:67:78:67:82:67:67 (remainder segments broken). Claws large, simple, distinctly micropectinate (fig. 5).

MATERIAL EXAMINED

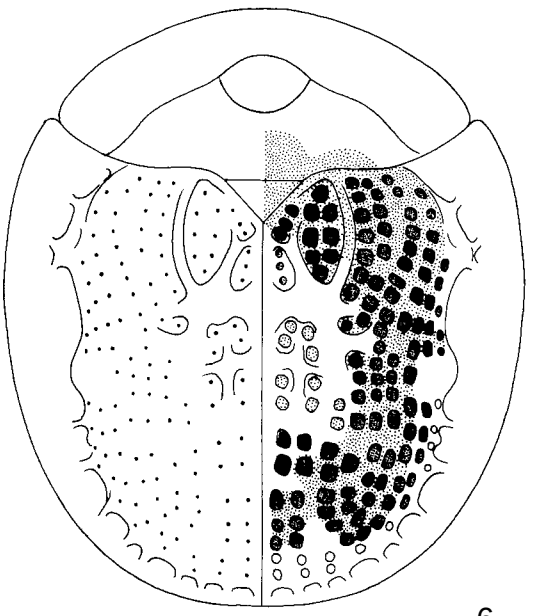
Holotype: "obtusa Bh. Brasil" "29493" (preserved at the Zoologisches Museum, Humboldt Universität, Berlin).

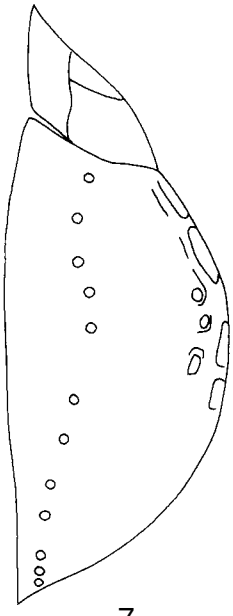
Charidotis plicatula BOHEMAN, 1855

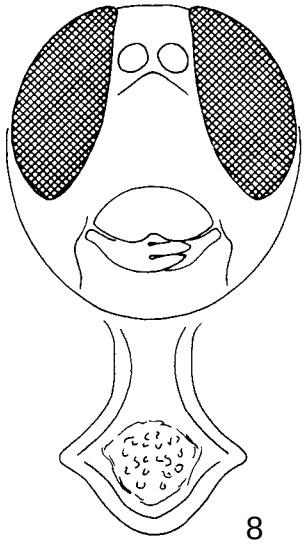
Charidotis plicatula BOHEMAN, 1855: 39, 1856: 152, 1862: 378; GEMMINGER & HAROLD, 1876: 3661; SPAETH, 1914: 147, 1936 b: 85; BLACKWELDER, 1946: 754; BOROWIEC, 1999: 353.

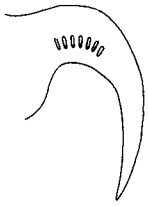
DIAGNOSIS

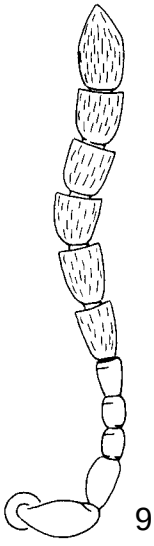
Its body colouration and structure are unique. Using SPAETH's (1936 b) key it runs to couple 184, to a group of species characterized by clypeus without deep sulci (54), body not wider than long (58), surface of clypeus smooth (74), antennae slim (78), clypeus not or only slightly longer than wide (90), elytra with puncturation arranged in regular rows (96), clypeal plate yellow (118), explanate margin of elytra uniformly yellow (152), second elytral interval not or only slightly convex (156), elytral disc without postscutellar tubercle (158), elytral outline almost circular (159), elytral disc without yellow transverse band (182), antennal segment 6 longer than segments 4 or 5 (183), and coarse elytral puncturation and intervals mostly narrower than rows (184). The group comprises also *Ch. astraea* SP., *Ch. carbunculus* SP., *Ch. repanda* (BOH.), and *Ch. subrugosa* (BOH.). *Ch. subrugosa* distinctly differs in uniformly yellow dorsum (maculate in *Ch. plicatula*), and *Ch. carbunculus* in central part of elytra reddish-brown, without yellow (with yellow central spot in *Ch. plicatula*). *Ch. repanda* differs in smaller size, with length below 5 mm (5.3-6.45 in *Ch. plicatula*), antennal segment 6 only slightly longer than segments 4 and 5 (distinctly longer in *Ch. plicatula*), and yellow central spot of elytra not forming a distinct relief (distinctly sculptured in *Ch. plicatula*). *Ch. astraea* is the most similar but differs in smaller size, with length below 4.7 mm (5.3-6.45 in *Ch. plicatula*), pronotal spot marked with small yellow spots (without spots in *Ch. plicatula*), and central, yellow elytral relief smaller, limited to the postscutellar area (large central relief in *Ch. plicatula*).











6-10. *Charidotis plicatula*: 6 – dorsal, 7 – lateral, 8 – head and prosternum, 9 – antenna, 10 – claw

DESCRIPTION

Length: 5.3-6.45 mm, width: 4.35-5.7 mm, length of pronotum: 1.9-2.4 mm, width of pronotum: 3.4-4.1 mm, length/width ratio: 1.10-1.22, width/length ratio of pronotum: 1.71-1.86. Body almost circular (fig. 6).

Pronotum yellow, at base with brown to black spot as in fig. 6. Scutellum reddish-brown to dark brown. Elytral disc with broad, reddish brown to brownish-black ring, on sides extending to submarginal row, at top to third interval. External border of the ring usually irregular, disturbed by elevated yellow spots. Internal border of the ring also irregular, disturbed by yellow central relief. The ring can be reduced or enlarged, in the holotype specimen the ring is reduced to irregular reticulation around elytral disc, in some specimens from Mato Grosso it is complete, with almost regular external borders. Central part of disc with yellow, punctate relief, its punctures often with reddish to brown centre. Marginal interval, and apex of disc yellow. Explanate margin of elytra yellow. Ventrites uniformly yellow, including legs and antennae, sometimes apex of last antennal segment slightly infuscate.

Pronotum elliptical, with maximum width in middle, sides rounded. Disc regularly convex, without impressions, its surface smooth and shiny, only basal spot with very fine and sparse puncturation. Explanate margin broad, smooth and shiny.

Scutellum triangular to slightly pentagonal with transverse sulci. Base of elytra moderately wider than pronotum. Disc evenly convex, at top with large relief of irregular star shape (fig. 7). Puncturation regular, very coarse, rows partly disturbed by elytral relief. Punctures of marginal row very coarse, slightly coarser than punctures in submarginal row, with elevated interspaces. Intervals on sides of disc very narrow, linear, irregular, in sutural part slightly narrower than rows, only on slope intervals 1-3 slightly wider than rows, their surface smooth and glabrous. Explanate margin broad, in the widest part as wide as half width of each elytron, moderately declivous, its surface smooth and shiny. Apical part of elytral margin and elytral epipleura with short setae, in dried specimens often broken.

Clypeus 1.3-1.5 times as wide as long, slightly convex, its surface smooth and glabrous, clypeal lines indistinct, visible only in basal third of clypeal plate. Labrum shallowly emarginate. Prosternal process distinctly expanded apically, with elevated sides, and slightly irregular to granulate apical part (fig. 8). Antennae slim, pubescent from sixth segment (fig. 9). Length ratio of antennal segments: 100:73:40:43:56:73:86:73:73:76:126, segment 6 distinctly longer than segments 4 and 5, segment three very small, c. twice shorter than second, segments 8 and 9 only slightly longer than wide. Claws large, simple, distinctly micropectinate (fig. 10).

MATERIAL EXAMINED

Holotype: “Brasil Sell.” “plicatula Boh.” “29457” (preserved at the Zoologisches Museum, Humboldt Universität, Berlin).

OTHER MATERIAL EXAMINED

Brazil, Minas Gerais, Uberaba, VI 1924, 1 ex.; Brazil, Mato Grosso, Chapada Plateau, Campo, X-XI 1993, 9 ex. (all preserved at the Department of Systematic Zoology and Zoogeography, Wrocław University, Wrocław, Poland).

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