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Two new species of *Cassida* L. from Borneo (Coleoptera: Chrysomelidae: Cassidinae)

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ABSTRACT. *Cassida unica* and *Cassida sabahensis* are described from Borneo. *Cassida unica* is unique with no close relatives in the Oriental Region, *C. sabahensis* belongs to the group of species close to *C. tumidicollis*.

Key words: entomology, taxonomy, new species, Coleoptera, Chrysomelidae, Cassidinae, *Cassida*, Oriental Region.

The genus *Cassida* L., with 400 described species, is the richest within the subfamily Cassidinae. Thirty species were recorded from the insular part of the Oriental Region, mostly endemic to the Philippines. Bornean fauna is poor, only 9 species were recorded: two endemic to the island, two known only from island part of the Oriental Region, and five wide spread in both insular and continental part of the Oriental Region (BOROWIEC 1999). In the material studied recently we found two new species from Borneo. Their descriptions are given below.

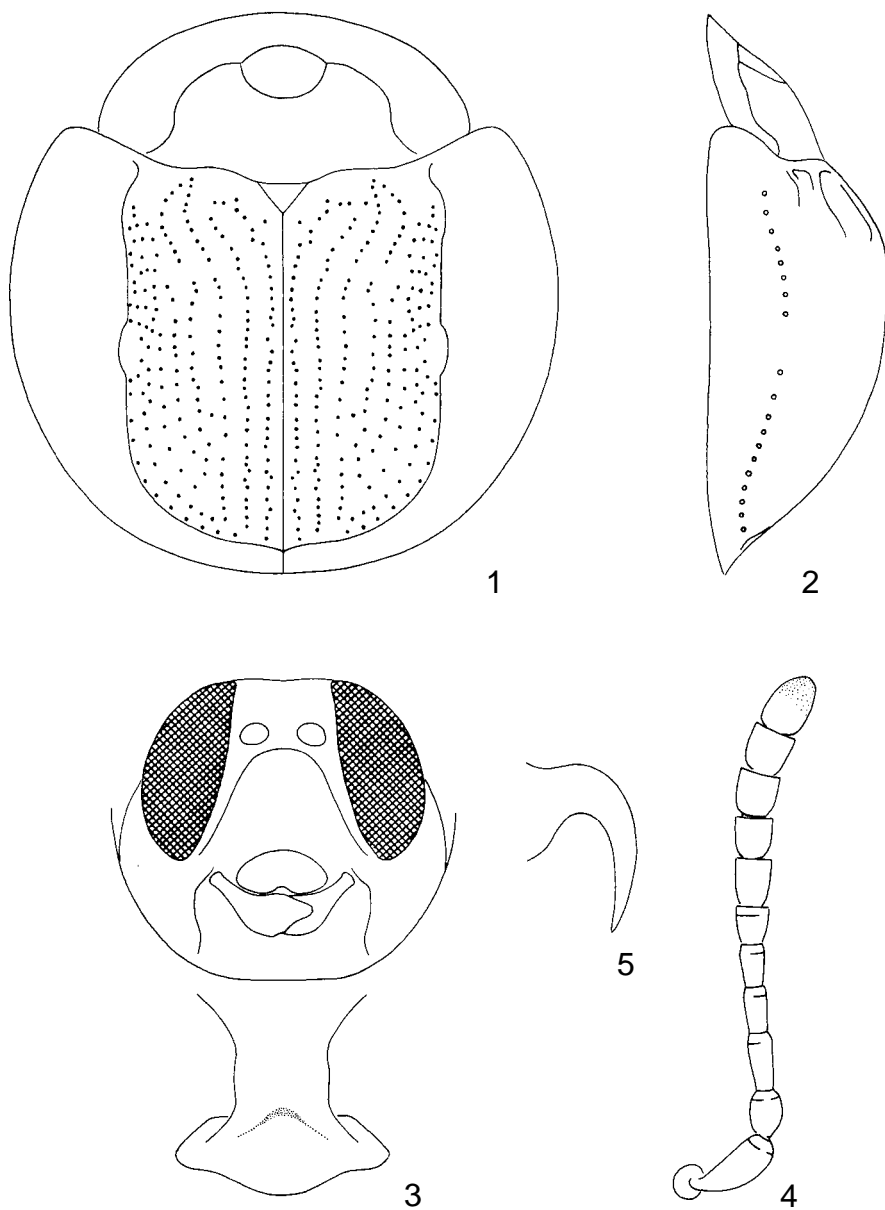
***Cassida unica* n. sp.**

ETYMOLOGY

Latin “*unica*” means unique. Named after its unique appearance.

DIAGNOSIS

It is unique species with no close relatives. At first glance it is the most similar to the male of *Aspidimorpha sarawacensis*, probably sympatric with *C. unica*,



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

but *A. sarawacensis* differs in pectinate claws, wide explanate margin of elytra, and antennal segment 4 not or only slightly shorter than segment 3. From the genus *Cassida* L. only large, immaculate specimens of *C. recondita* BOH., sympatric in Borneo, are slightly similar, but differ in slim, filiform antennae, coarser elytral puncturation, angulate humeral angles, high prosternal collar, and apparently appendiculate claws.

DESCRIPTION

Length: 7.9-8.3 mm, width: 7.6-7.8 mm, length of pronotum: 2.8-3.0 mm, width of pronotum: 4.95-5.3 mm, length/width ratio: 1.04-1.06, width/length of pronotum ratio: 1.77. Body almost circular (fig. 1).

Body uniformly yellow, including legs and antennae, only dorsal side of last antennal segment brown.

Pronotum broad, intermediate between elliptical and semicircular, with maximum width slightly before base, posterior corners marked but hidden under anterior margin of elytral marginalia. Disc moderately convex, impunctate, shiny. Explanate margin broad, transparent, with honeycomb structure, impunctate, shiny.

Scutellum large, triangular, without sulci. Base of elytra distinctly wider than pronotum, humeral angles only slightly protruding anterad, rounded. Anterior margin of disc with black crenulation. Disc regularly, moderately convex (fig. 2), with shallow but well marked postscutellar and principal impressions. Puncturation regular, fine. Rows not impressed, in lateral rows punctures only slightly coarser than in sutural rows. Punctures in rows sparse, especially on sides of disc and slope, distance between punctures from as wide as to four times wider than puncture diameter. Intervals broad, four to six times wider than rows, flat, smooth and shiny. Marginal row distinct, with punctures distinctly coarser than in lateral rows. In the middle marginal row broken by a broad lateral fold. Explanate margin broad, in the widest part approximately as wide as 0.7 width of each disc of elytron, almost horizontal. Surface of explanate margin smooth, shiny, transparent with honeycomb structure. Apex of elytral epipleura with sparse erect hair.

Clypeus 1.5 times as wide as long, clypeal plate flat, slightly elevated before antennal insertions. Surface of clypeus smooth, shiny, faint clypeal grooves visible only in basal third of clypeal plate. Labrum shallowly emarginate (fig. 3). Venter of pronotum without antennal grooves. Prosternal collar very short, prosternal process broad, in the middle as broad as coxa, apex strongly expanded. Anterior part of prosternal process with long erect hair. Central part of prosternal process impressed, apex slightly granulate. Antennae stout, length ratio of antennal segments: 100:45:65:45:43:38:53:40:45:40:60. Segment 3 c. 1.4 times as long as segment 2. Segment 4 very short, as long as segment 2. Segments 8-10 slightly transverse (fig. 4).

Legs stout. Claws large, simple (fig. 5).

DISTRIBUTION

Malaysia: Borneo: Sabah: Mt. Kinabalu.

TYPES

Holotype: "MALAYSIA: Borneo, Sabah, 1500 m, Kinabalu, 3 VIII 1993"; paratype: "MALAYSIA: N Borneo, Mt. Kinabalu" (both preserved at the Department of Systematic Zoology and Zoogeography, Wrocław University, Wrocław, Poland). Paratype specimen has missing antennae, right fore and hind tibia and tarsus, and both mid tarsi.

***Cassida sabahensis* n. sp.**

ETYMOLOGY

Named after its terra typica, Sabah province in North Borneo.

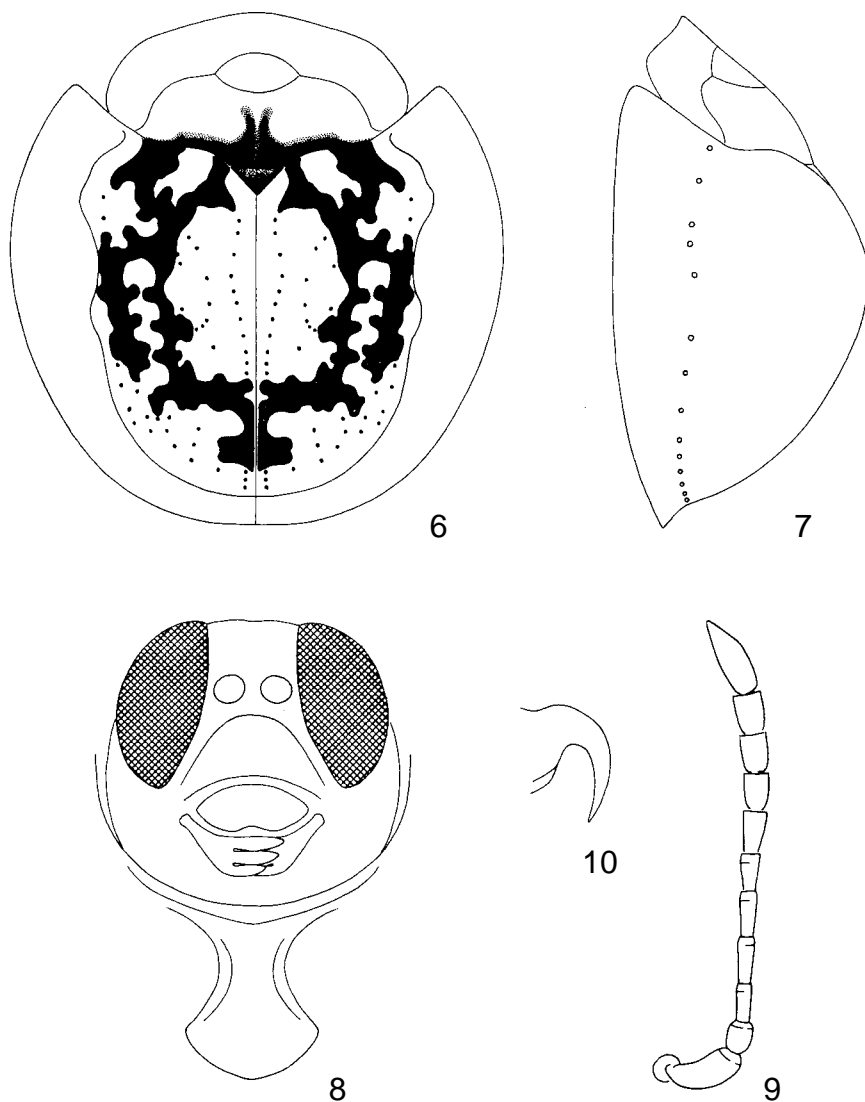
DIAGNOSIS

It belongs to the group of species close to *C. tumidicollis* (CHEN et ZIA), separated by CHEN et ZIA (1961) into different genus *Cyrtonocassis*; later (CHEN et al. 1986) placed it as a subgenus in the genus *Taiwania* Spaeth. In BOROWIEC's (1999) catalogue both names were placed under synonymy of the genus *Cassida* L. The group is characterized by the following characters: pronotum stout, widest in or slightly before middle, pronotal disc on sides separated from explanate margin by a sulcus, elytral disc regularly and strongly convex, clypeus broad, antennae slim with segment 4 slightly longer than segment 3, apex of elytral epipleura pubescent, and claws simple or simple but appearing more or less appendiculate due to distally projecting sides of claw segment. Only two species belong to the group hitherto: *C. conchyliata* (Sp.) and *C. tumidicollis* (CHEN et ZIA). *C. conchyliata* differs in red pronotal disc and elytral pattern of numerous yellow spots at black background (*C. sabahensis*: yellow pronotal disc and elytral pattern of black reticulation around yellow disc). *C. tumidicollis* differs in larger size, with length of 6.6-7.3 mm, and elytral pattern of large brown spots on yellow background (*C. sabahensis*: size below 6 mm, and elytral pattern of black reticulation around yellow disc). In *C. sabahensis* projecting flanks of claw segments are very small and claws appear simple, while in both relatives claws are strongly apparently appendiculate. Some specimens of *C. inflaccens* Sp. from Indochina has similar pattern to *C. sabahensis*, but belongs to a different group of species with broad pronotum, border between pronotal disc and marginalia without deep sulcus, elytral marginalia very broad and less declivous than in *C. sabahensis*, clypeus narrow, and slim, filiform antennae.

DESCRIPTION

Length: 5.8 mm, width: 5.4 mm, length of pronotum: 2.2 mm, width of pronotum: 3.4 mm, length/width ratio: 1.07, width/length of pronotum ratio: 1.55. Body almost circular (fig. 6).

Pronotum yellow, basal margin of disc black, base of disc in the middle with black)(-shaped figure. Scutellum yellow with brown margins. Elytral disc yellow, surrounded by a black reticulate pattern as in fig. 6, marginal interval and slope mostly yellow. Explanate margin of elytra yellow. Ventrites yellow, including legs and antennae, only apex of last antennal segment infusate dorsally.



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

Pronotum stout, only 1.55 times as wide as long, elliptical, with maximum width slightly before middle, sides broadly rounded, no basal corners. Disc strongly convex, with anterior margin trilobate. Central lobe indistinctly, lateral lobes distinctly bordered from marginalia by a sulcus. Disc smooth, shiny. Explanate margin broad, transparent, with honeycomb structure, smooth and shiny.

Scutellum large, triangular, without sulci. Base of elytra much wider than pronotum. Humeral angles strongly protruding anterad and extending distinctly before middle of pronotum, obtuse. Anterior margin of disc with very fine black crenulation. Disc strongly convex, with top of the convexity in postscutellar area (fig. 7). Postscutellar impressions very shallow, gently marked, principal impression shallow but distinct. Punctuation of disc mostly regular, but on yellow parts of disc punctuation slightly disturbed. On black parts of disc punctuation distinctly coarser than on yellow parts, punctuation in rows arranged partly irregularly, punctures partly grouped, partly separated by long distances. Marginal row distinct, its punctures only slightly coarser than in submarginal row. In middle marginal row broken by a broad lateral fold. Intervals broad, second interval c. twice wider than third, in sutural part of disc intervals three to five times as wide as rows, on sides intervals two to three times as wide as rows, only marginal interval broad, c. twice wider than lateral intervals. Yellow central part of disc, and yellow spots within the dark reticulation slightly elevated, form indistinct relief. Surface of intervals smooth, shiny. Explanate margin broad, in the widest part approximately as wide as half width of each disc of elytron, softly declivous. Surface of explanate margin smooth, shiny, transparent with honeycomb structure. Apex of elytral epipleura with sparse erect hair.

Clypeus twice as wide as long, with deep clypeal grooves converging in triangle (fig. 8). Clypeal plate flat, smooth and shiny. Labrum without median emargination. Venter of pronotum without antennal grooves. Prosternal collar very short, prosternal process broad, in the middle as broad as coxa, apex only slightly expanded. Central part of prosternal process shallowly impressed, apex smooth and shiny. Antennae slim, length ratio of antennal segments: 100:37:53:73:60:60:66:56:60:60:113. Segment 3 c. 1.5 times as long as segment 2. Segment 4 long, twice as long as segment 2 and c. 1.4 times as long as segment 3. Segments 8-10 longer than wide (fig. 9).

Legs slim, last segment of tarsi not modified, with only slightly projecting flanks. Claws simple (fig. 10).

DISTRIBUTION

Malaysia: Borneo: Sabah.

TYPES

Holotype: "MALAYSIA: Borneo, Sabah, Crocker Range N.P., Mawar Waterfall, 19 VI 1998" (preserved at the Department of Systematic Zoology and Zoogeography, Wrocław University, Wrocław, Poland).

REFERENCES

- BOROWIEC, L., 1999. A world catalogue of the Cassidinae (Coleoptera: Chrysomelidae). Biologica Silesiae, Wrocław, 476 pp.
- CHEN, S. H., ZIA, Y., 1961. Results of the zoologico-botanical expedition to Southwest China 1955-1957 (Coleoptera, Cassidinae). Acta Entomol. Sinica, 10: 439-451.
- CHEN, S., YU, P., SUN, C., ZIA, Y., 1986. Coleoptera Hispidae. In: Fauna Sinica, Insecta. Science Press, Beijing, 653 pp. + XV pl.