

TWO NEW SPECIES OF *CASSIDA* LINNAEUS FROM THE ORIENTAL REGION (COLEOPTERA: CHRYSOMELIDAE: CASSIDINAE)

LECH BOROWIEC and JOLANTA ŚWIĘTOJAŃSKA

Zoological Institute, University of Wrocław, Sienkiewicza 21, 50-335 Wrocław, Poland

Abstract.— *Cassida mroczkowskii* sp. nov. from Vietnam (Sa pa) and *C. antoni* sp. nov. from India (Meghalaya) are described. Both belong to a large group of Oriental species classified in the artificial subgenus *Cyclocassida* Chen et Zia, 1961. *Taiwania* (*Cyclocassida*) *subprobata* Chen et Zia and *Taiwania* (*Cyclocassida*) *variabilis* Chen et Zia are transferred to the genus *Cassida* Linnaeus.



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

The genus *Cassida* Linnaeus comprises c. 150 species in the Oriental Region (Spaeth 1914, Borowiec in prep.). They were classified in several subgenera, mostly based on structure of tarsal claws. Small species with almost regularly convex body, elytral base not or slightly wider than pronotum, clypeus smooth and glabrous without or with only a few punctures and simple tarsal claws are usually classified in the artificial subgenus *Cyclocassida* Chen et Zia, 1961. In recent materials, sent to us for identification, we found two species new to the science belonging to this group. Their descriptions are given below.

Cassida mroczkowskii sp. nov. (Figs 1–5)

Etymology. Dedicated to Prof. Maciej Mroczkowski, an excellent Polish entomologist.

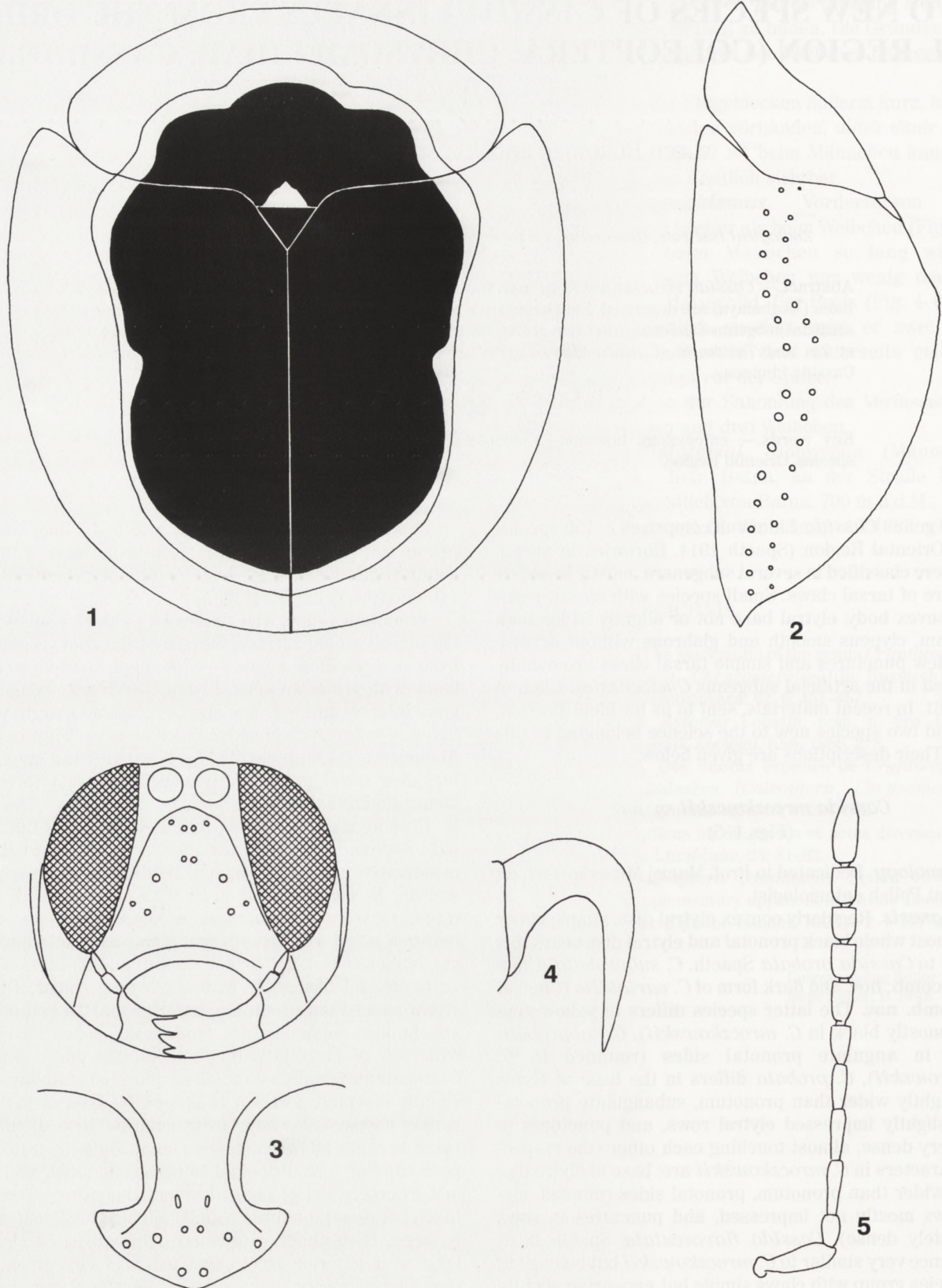
Diagnosis. Regularly convex elytral disc, simple claws and almost whole black pronotal and elytral disc nears this species to *Cassida probata* Spaeth, *C. subprobata* (Chen et Zia) **comb. nov.** and dark form of *C. variabilis* (Chen et Zia) **comb. nov.** The latter species differs in yellow ventrites (mostly black in *C. mroczkowskii*), *C. subprobata* differs in angulate pronotal sides (rounded in *C. mroczkowskii*), *C. probata* differs in the base of elytra only slightly wider than pronotum, subangulate pronotal sides, slightly impressed elytral rows, and punctures in rows very dense, almost touching each other (the respective characters in *C. mroczkowskii* are: base of elytra distinctly wider than pronotum, pronotal sides rounded, elytral rows mostly not impressed, and punctures in rows moderately dense). *Cassida flavoscutata* Spaeth is at first glance very similar to *C. mroczkowskii* but belongs to the species group with claws simple but appearing slightly appendiculate due to distally projecting flanks of the last tarsal segment. Pronotal sides in *C. flavoscutata* are subangulate while in *C. mroczkowskii* they are rounded.

Description. Length: 4.7 mm, width: 4.2 mm, length of pronotum: 1.6 mm, width of pronotum: 3.2 mm, length/width ratio: 1.12, width/width of pronotum ratio: 1.31. Body subcircular (Fig. 1).

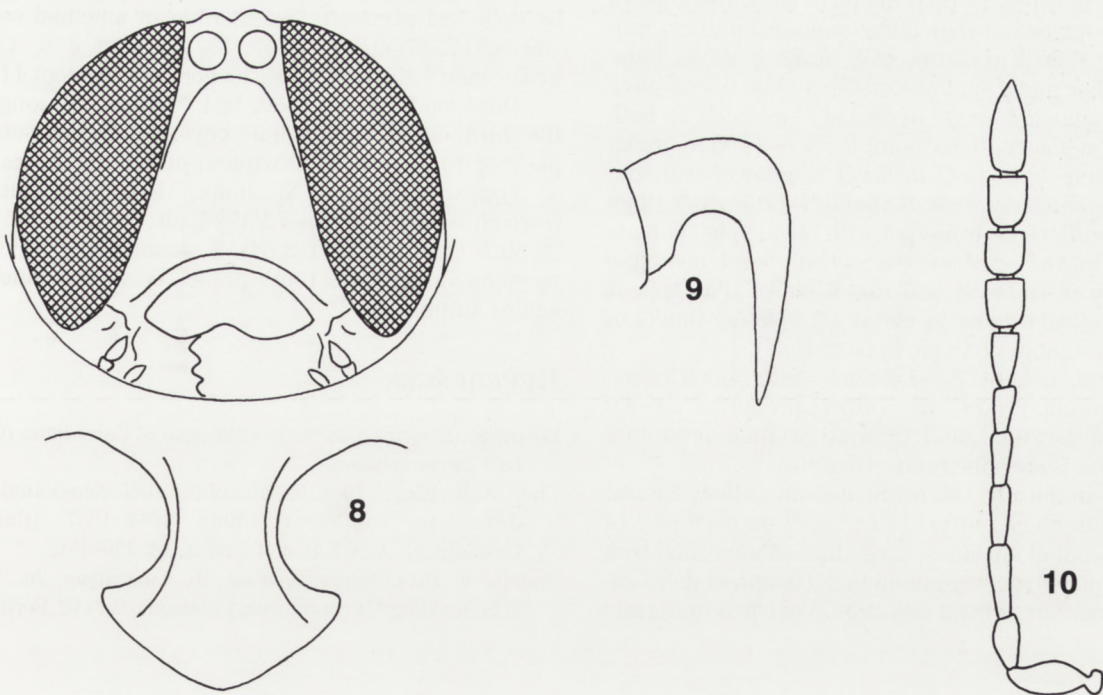
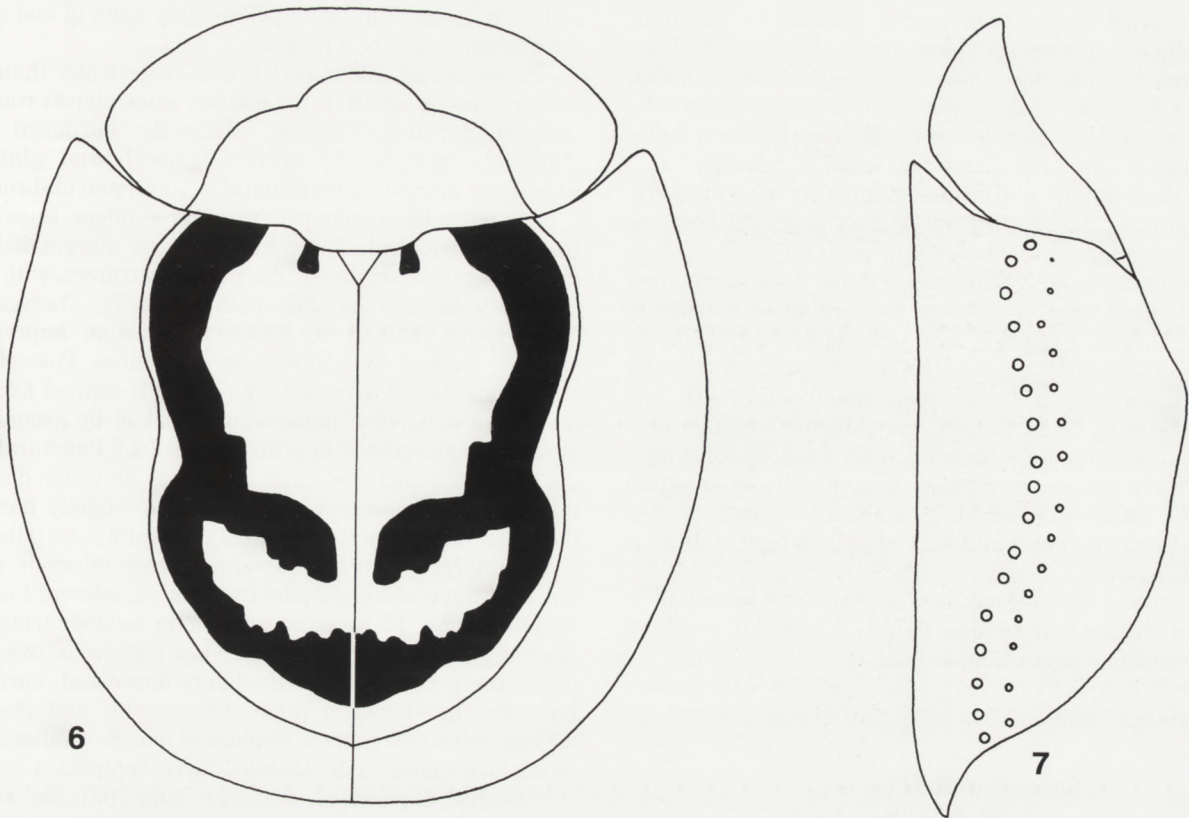
Pronotum yellow, disc with a large black spot, occupying almost whole surface, margin of the spot trilobate. In front of scutellum a small yellow spot. Scutellum mostly black with yellowish apex. Elytral disc black, except marginal interval and extreme apex. Explanate margin yellow. Clypeus yellow with blackish basal corners. Thorax black. Abdomen black with narrowly yellow sides and apex. Legs including coxae yellow. Antennae yellow, last three segments slightly infusate.

Pronotum elliptical, very broad, twice wider than long, with maximum width in the middle, sides rounded. Disc moderately convex, distinctly bordered from explanate margin, in praescutellar area with several small punctures, in front of scutellum a small, deep pit. Space between punctures smooth and glabrous. Explanate margin subhorizontal, its surface smooth and glabrous.

Scutellum triangular with transverse sulcus. Base of elytra wider than pronotum, anterior margin gently arcuate, humeri rounded. Disc moderately, regularly convex with top of convexity in postscutellar point (Fig. 2). Postscutellar impressions distinct, postscutellar point slightly elevated, forms a H-shaped transverse fold, borders of postscutellar impressions marked by a slightly elevated arcuate folds which are connected with transverse postscutellar fold. Principal impressions small and shallow. Puncturation of elytra regular, punctures large, distance between punctures usually slightly smaller to slightly larger than puncture diameter. Punctures on slope as large as in anterior part of disc, punctures in sutural rows only slightly larger than in lateral. Marginal row distinct, its punctures only slightly larger than in submarginal row. Rows 1 and 2 slightly impressed, remaining not impressed. Interval 1 as wide as neighbouring rows, interval 2 in ante-



Figures 1–5. *Cassida mroczkowskii* sp. nov. (1) body colouration; (2) body in lateral view; (3) clypeus and prosternum; (4) tarsal claw; (5) antenna.



Figures 6–10. *Cassida antoni* sp. nov. (6) body colouration; (7) body in lateral view; (8) clypeus and prosternum; (9) tarsal claw; (10) antenna.

rior part twice, in posterior part c. 1.2 times wider than rows, behind transverse postscutellar fold interval 2 slightly elevated, on slope flat. Intervals in lateral rows c. twice narrower than rows, submarginal and marginal interval as wide as or slightly wider than rows. Surface between punctures slightly irregular, forms few small transverse folds, but disc does not appear rugose. Explanate margin of elytra subhorizontal, shallowly but densely punctate, appears slightly irregular. Elytral epipleura bare.

Clypeus moderately wide, c. 1.4 times wider than long, flat, with deep clypeal grooves converging in a triangle (Fig. 3). Surface glabrous, with several small punctures. Labrum shallowly emarginate. Prosternal process strongly expanded apically (Fig. 3), apex rhomboidal, with few large punctures, its surface appears slightly irregular.

Antennae elongate, exceeding lateral margin of pronotum by their last two segments. Length ratio of antennal segments: 100:38:85:77:62:54:60:54:48:54:115. Segment 3 c. 2.4 times longer than 2 and only slightly longer than segment 4 (Fig. 5).

Tarsi moderately broad, last segment not longer than the third, without projecting flanks, claws not reaching beyond marginal setae, simple (Fig. 4).

Type. Holotype: "Vietnam, Sa pa, 21.XI.1971, ex collection Lech Borowiec" (preserved in collection of the senior author).

Cassida antoni sp. nov.
(Figs 6–10)

Etymology. Dedicated to Klaus-Werner Anton (Emmendingen, Germany) who sent us specimens of this new species.

Diagnosis. Elytral pattern in this species is unique. At first glance *Cassida justa* Spaeth and *C. saginata* Spaeth are the most similar but they differ in elytral pattern reddish to brown (black in *C. antoni*), forming only a band along elytral disc and a spot behind the middle (incomplete transverse band in 2/3 length of disc in *C. antoni*). In both these species in postscutellar point there is a red to brown small spot (immaculate in *C. antoni*). Similar elytral spot is found in *C. tenasserimensis* Spaeth (= *binorbis* Chen et Zia) which differs in pronotum with basal spot (immaculate in *C. antoni*), transverse elytral band complete (incomplete in *C. antoni*) and tarsal claws that appear slightly appendiculate due to distally projecting flanks of the last tarsal segment (simple in *C. antoni*).

Description. Length: 5.5–5.8 mm, width: 4.9–5.3 mm, length of pronotum: 1.8–2.0 mm, width of pronotum: 3.6–4.0 mm, length/width ratio: 1.09–1.12, width/width of pronotum ratio: 2.65–2.72. Body subcircular (Fig. 6).

Pronotum uniformly yellow. Scutellum yellow. Elytral disc yellow with black pattern: small spot on each side of scutellum, a band along sides, exceeding submarginal row, and an incomplete transverse band in 2/3 length of disc broken in the middle by sutural elevation. Ventrites uniformly

yellow. Legs and antennae yellow, only apex of last antennal segment slightly infuscate.

Pronotum elliptical, very broad, twice wider than long, with maximum width in the middle, sides almost rounded. Disc moderately convex, distinctly bordered from explanate margin, its surface smooth and glabrous. Explanate margin subhorizontal, smooth and glabrous.

Scutellum triangular, with transverse sulcus. Base of elytra slightly wider than pronotum, anterior margin distinctly arcuate, humeri angulate. Disc regularly convex, with top of convexity in postscutellar point (Fig. 7). Postscutellar impressions shallow but distinct, principal impressions shallow, marked by a few large punctures. Postscutellar point with slightly elevated transverse H-shaped fold, borders of postscutellar impressions marked by arcuate low elevation connected with postscutellar fold. Puncturation of disc regular, punctures large and dense on whole disc, distance between punctures as wide as to slightly narrower than puncture diameter. Marginal row distinct, its punctures c. twice larger than in submarginal row. Intervals mostly flat, only interval 1 and 2 slightly elevated, interval 1 as wide as, interval 2 c. 1.5 times wider than the neighbouring rows. Intervals in lateral part of disc very narrow, c. twice narrower than rows. Rows 1–3 slightly impressed, surface of intervals and between punctures smooth and glabrous, without folds or wrinkles. Explanate margin subhorizontal, its surface smooth and glabrous. Elytral epipleura bare.

Clypeus narrow, as wide as long, flat, its surface smooth and glabrous, clypeal grooves very fine, converging in a narrow arch. Labrum shallowly emarginate. Prosternal process strongly expanded apically (Fig. 8), apex rhomboidal, with four small punctures, its surface microsculptured.

Antennae elongate, exceeding lateral margin of pronotum by their last segment. Length ratio of antennal segments: 100:58:92:75:67:50:65:64:50:58:115. Segment 3 c. 1.6 times longer than 2 and c. 1.2 times longer than segment 4 (Fig. 10).

Tarsi moderately broad, last segment not longer than the third, claws not reaching beyond marginal setae, simple (Fig. 9), last segment without projecting flanks.

Types. Holotype: "NE India, Meghalaya state, West Garo Hills reg., Tura, 5–7.V.1996, alt. 700±100 m" "GPS N 25°30.7' E 90°13.9' (WGS 84), E. Jendek & O. Sausa leg."; paratype: same data (both preserved in the collection of senior author).

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