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## Two new species of *Microctenochira* SPAETH from Brazil and Peru\* (Coleoptera: Chrysomelidae: Cassidinae)

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ABSTRACT. Two new species of *Microctenochira*: *M. danielssoni* BOROWIEC n. sp. (Peru: Madre de Dios) and *M. chapada* ŚWIĘTOJAŃSKA and BOROWIEC n. sp. (Brazil: Mato Grosso) are described.

Key words: Entomology, taxonomy, new species, Neotropics, Coleoptera, Chrysomelidae, Cassidinae.

The genus *Microctenochira* SPAETH, 1926 was reviewed by SPAETH (1926 a) under a homonymic name *Ctenochira* CHAPUIS, 1875 not FOERSTER 1855. He listed 99 species grouped in two subgenera: *Microctenochira* (4 species) and *Ctenochira* s. str. (remaining species). This division, in our opinion, is artificial, the genus is very heterogenous and it is impossible to divide it into natural species groups. In his later papers SPAETH (1926 b, c, 1932) described four other species, thus the genus is one of the most speciose in the subfamily Cassidinae.

In the material lent us by R. DANIELSSON (Zoological Museum, Lund University, Lund, Sweden) and R. DAVIDSON (Carnegie Museum, Pittsburg, USA) there are two new species. Their description is given below.

### *Microctenochira danielssoni* BOROWIEC n. sp.

#### ETYMOLOGY

Dedicated to R. DANIELSSON, the curator of the Coleoptera collection in Zoological Museum, Lund University, Sweden.

\*Papers Celebrating the 90th Birthday of Dr. Bolesław Burakowski

## DIAGNOSIS

It is a very distinct species, at first glance more similar to the species of the genus *Charidotis*, especially to *Charidotis cincticulus* group, than to the members of the genus *Microctenochira*. It was collected in the same locality as specimens of *Charidotis cincticulus* (BOH.) and probably it is an example of Muellerian mimicry, common in Neotropical cassids. In SPAETH's (1926 a) key it runs to the couplet 63, species with long antennae, impressed clypeus, explanate margin of elytra impunctate, third antennal segment only slightly shorter than the second and elytra regularly convex without postscutellar impressions. This group comprises 24 species, seven of them have elytral pattern with dark ring. *M. servula* (BOH.) and *M. porosa* (BOH.) differ in dark scutellum (yellow in *C. danielssoni*); *M. waterhousei* (BOH.), *M. napaea* (BOH.), *M. similata* (BOH.), *M. liquidata* (SP.) and *M. chryseis* (SP.) differ in elytral ring bicoloured, reddish to brown with darker brown or black sides (uniformly black in *M. danielssoni*). The last five species are distinctly larger than *M. danielssoni*, with body length at least 5.5 mm (below 5 mm in *M. danielssoni*). At first glance the most similar species to *M. danielssoni* is *M. lindigi* (KIRSCH) from Colombia and Bolivia. It forms a variety with elytral pattern with black ring and often black-marked central yellow spot like in *M. danielssoni*. *M. lindigi* is slightly larger (body length 5.0-5.2 mm), the best character distinguishing both species is the length ratio of antennal segments 2-4 - in *M. lindigi* segment 3 is twice shorter than 2 (only slightly shorter in *M. danielssoni*) and more than twice shorter than segment 4 (1.5 times shorter in *M. danielssoni*).

## DESCRIPTION

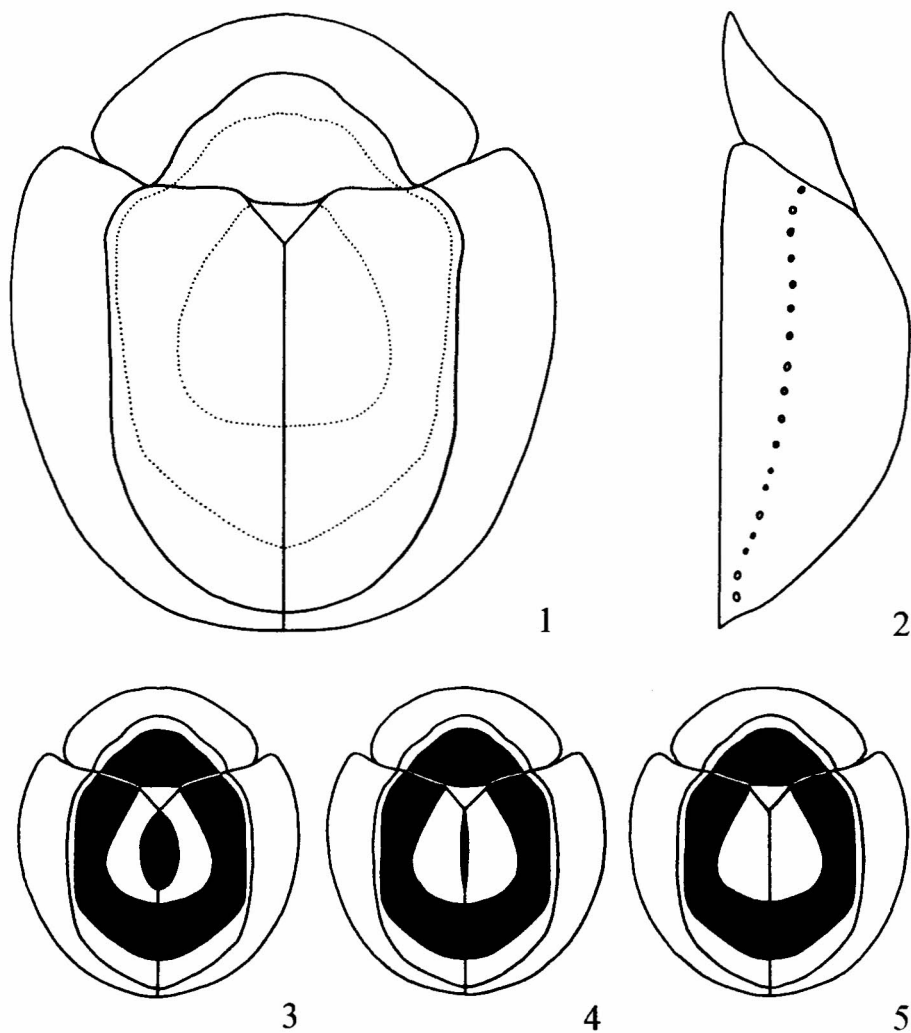
Length: 4.7 mm, width: 4.2-4.3 mm, length of pronotum: 1.5-1.6 mm, width of pronotum: 2.9-3.1 mm, length/width ratio: 1.09-1.12.

Yellow, pronotal disc with large basal, trapezial, black spot (figs 3-5), which is connected with elytral ring. Elytra with large black ring occupying intervals 6-9 except marginal interval. Scutellum yellow. Yellow centre of ring immaculate, or only suture with narrow elongate black spot, or in sutural part large oval black spot (figs 3-5). In apical part ring slightly protruding along suture, subacuminate. Antennae uniformly yellow or segments 7-9 slightly infusate. Ventriles yellow.

Pronotum ellyptical, with maximum width slightly behind the middle, sides rounded. Disc distinctly convex, indistinctly bordered from explanate margin, at base with two deep, oblique impressions, on sides with group of 3-4 punctures, surface smooth, shiny. Explanate margin broad, subhorizontal, surface smooth, shiny, with honeycomb structure.

Scutellum triangular, with no impressions or sulci. Base of elytra distinctly wider than pronotum, humeral angles rounded (fig. 1). Disc strongly, regularly convex (fig. 2). No postscutellar impressions. Punctuation of disc coarse, mostly regular, only in yellow central spot rows are slightly irregular. Distance between punctures in rows as wide as or slightly larger than puncture diameter. In posterior half of disc rows shallowly impressed, punctures in anterior part of rows slightly

larger than in posterior part. Marginal row distinct, its punctures 2-3 times larger than in submarginal row. Intervals in sutural half of disc as wide as or slightly wider than rows, slightly, irregularly convex; intervals in marginal half of disc c. twice narrower than rows, only marginal interval c. twice wider than submarginal row. Principal impression hardly marked by group of 7-8 punctures slightly larger than punctures in neighbouring rows. No lateral impression. Explanate margin subhorizontal, very broad, in the widest part as wide as  $\frac{2}{3}$  width of each disc, surface smooth, shiny, with honeycomb structure. Apex of elytral epipleura bare.



1-5. *Microctenochira danielssoni*: 1 - body in dorsal view, 2 - body in lateral view, 3-5 - variation of dorsal maculation

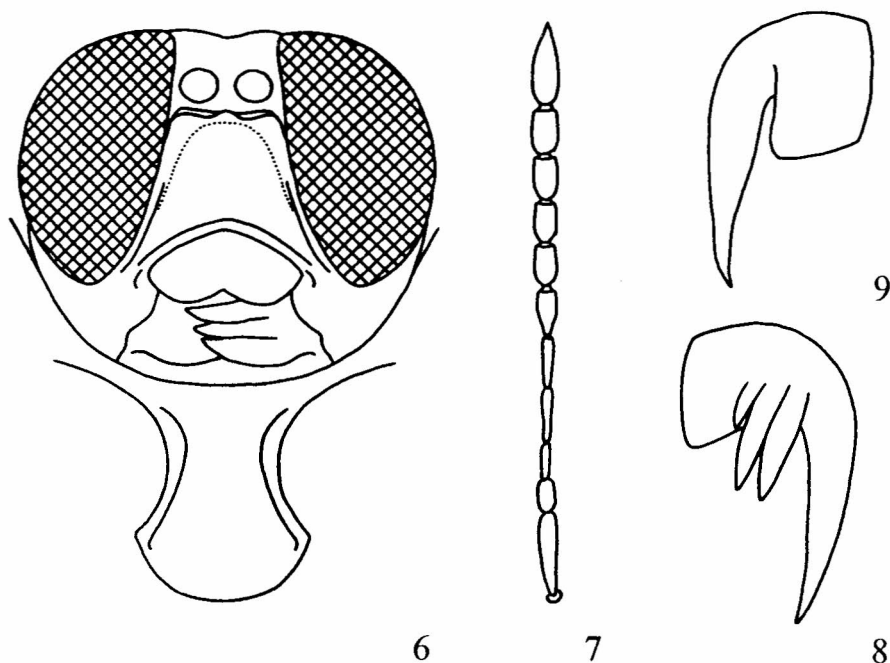
Clypeus moderately broad, 1.2 times wider than long, anterior margin converging in an angle, laterally with short, oblique frontoclypeal grooves. Clypeal grooves very fine, distinct only in basal half of clypeus. Clypeal plate in anterior part deeply impressed, its surface microreticulate but shiny. Eyes large, occupy whole sides of head. Labrum broad, shallowly emarginate to 1/4 length (fig. 6). Prosternal collar very short, c. twice shorter than length of second antennal segment. Prosternal process between procoxae broad, moderately expanded apically (fig. 6), apex rhomboidal, its surface smooth and shiny.

Antennae long and thin, extending to hind coxae. Five basal segments glabrous and sparsely pubescent, segment 6 denser pubescent than segment 5 but sparser than segment 7, segments 7-11 dull and densely pubescent. Length ratio of antennal segments: 100:43:39:57:54:54:46:46:46:93. First segment elongate, second more than twice shorter, third slightly shorter than the second (fig. 7).

Legs slim, last segment of tarsi as long as the third. Fore claws with large basal tooth (fig. 8), mid and hind claws with large pecten, extending to half length of claw (fig. 9).

#### TYPES

Holotype and two paratypes: Peru: Madre de Dios, Puerto Maldonado, 3.I.1984, leg. L. HUGGERT (holotype and paratype in Zoological Museum, Lund University, Lund, Sweden, one paratype in the collection of junior author).



6-9. *Microctenochira danielssoni*: 6 - head and prosternum, 7 - antenna, 8, 9 - tarsal claws: 8 - fore tarsi, 9 - mid tarsi

***Microctenochira chapada* ŚWIĘTOJAŃSKA et BOROWIEC n. sp.**

## ETYMOLOGY

Named after the type locality Chapada in Mato Grosso Province of Brazil.

## DIAGNOSIS

In SPATH's (1926 a) key it runs to the couplet 124, species with long antennae, impressed clypeus, explanate margin of elytra impunctate, third antennal segment only slightly shorter than the second and elytra with shallow postscutellar impressions. This group comprises numerous species, only four of them have explanate margin of elytra with dark humeral and posterolateral spots like in *M. chapada*. *M. semilunaris* (BOH.) differs in elytral pattern with band along sides and punctures marked with brown or red (in *M. chapada* elytral disc mostly unicolor and punctures not marked with dark colour), *M. hectica* (BOH.) differs in strong elytral puncturation, *M. stali* (BOH.) differs in coloration mostly black and humeral and posterolateral spots of explanate margin very short, extending at most to the middle of explanate margin (in *M. chapada* extending to margin of elytra), *M. lugubris* (BOH.) differs in elytral disc black and antennal segment 10 at least in apical half black (in this species often three last antennal segments are black) while in *M. chapada* only apical half of last segment is infusate.

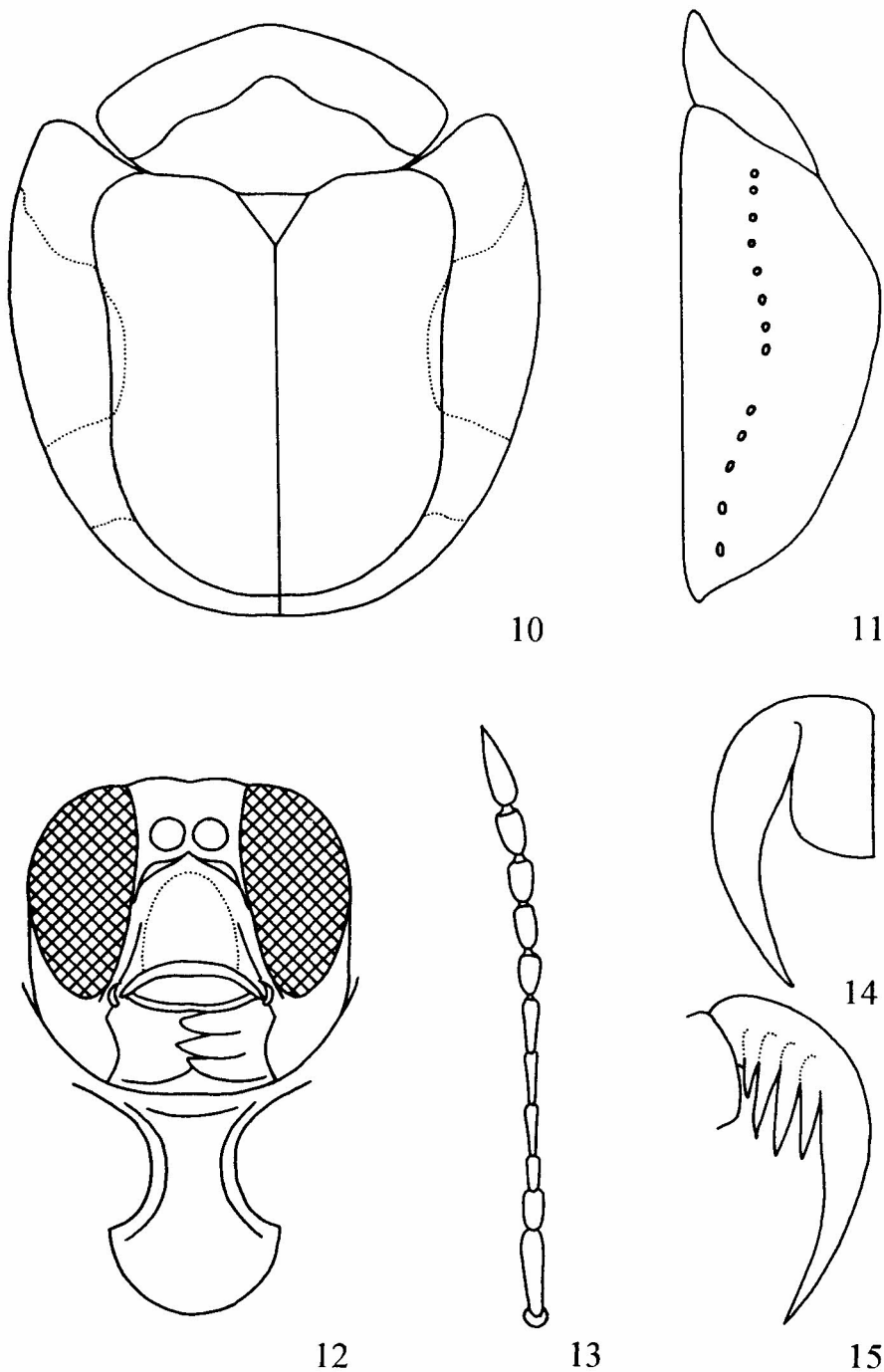
## DESCRIPTION

Length: 5.3-5.7 mm, width: 4.4-4.8 mm, length of pronotum: 1.6-1.8 mm, width of pronotum: 3.0-3.2 mm, length/width ratio: male 1.15-1.18, female 1.23-1.24.

Yellow, pronotal disc mostly red-brown to brown, except yellow margin and yellow, oval spot on each side, the spot is sometimes connected with yellow margin. Scutellum yellow-red, in specimens with brown elytral disc margins of scutellum infusate. Elytral disc mostly red-brown to brown, sutural interval in posterior half often with 3-5 small, yellow spots. Marginal interval in the middle and extreme apex of disc yellow. Explanate margin with large humeral and posterolateral spots of the same colour as disc, the spots extending to the margin of elytra. Antennae yellow, only apex of last segment infusate to black. Ventrites yellow.

Pronotum ellyptical, with maximum width in the middle, sides narrowly rounded. Disc distinctly convex, sides bordered from explanate margin by row of punctures; base with two deep, oblique impressions, each side of disc with shallow impression, surface smooth, shiny. Explanate margin broad, subhorizontal, surface smooth, shiny, with honeycomb structure.

Scutellum triangular, with no impressions or sulci. Base of elytra distinctly wider than pronotum, humeral angles with blunt angulation (fig. 10). Disc strongly convex, with top of convexity in postscutellar point (fig. 11). Postscutellar impression shallow but distinct. Puncturation in sutural half of disc fine, only in impressions larger, mostly regular. Punctures in rows partly grouped in 2-3, distance between punctures in groups c. twice larger than puncture diameter, between groups



10-15. *Microctenochira chapada*: 10 - body in dorsal view, 11 - body in lateral view, 12 - head and prosternum, 13 - antenna, 14, 15 - tarsal claws: 14 - fore tarsi, 15 - mid tarsi

3-5 times larger than puncture diameter. In posterior half of disc rows not impressed, punctures in anterior part of rows only slightly larger than in posterior part (except large punctures in impressions). Marginal row distinct, its punctures 2-3 times larger than in submarginal row. Intervals in sutural half of disc 3-5 times wider than rows, flat; intervals in marginal half of disc as wide as rows, marginal interval thrice wider than submarginal row. Principal impression distinct, marked by group of 4-5 punctures slightly larger than punctures in neighbouring rows. Lateral impression distinct, marked by group of punctures larger than in neighbouring rows. Explanate margin subhorizontal, very broad, in the widest part as wide as  $2/3$  width of each disc, surface smooth, shiny, with honeycomb structure. Apex of elytral epipleura bare.

Clypeus moderately broad, 1.2 times wider than long, anterior margin converging in an arch, laterally with short, oblique frontoclypeal grooves. Clypeal grooves very fine, distinct only in basal half of clypeus. Clypeal plate in anterior part deeply impressed, its surface microreticulate but shiny. Eyes large, occupy whole sides of head (fig. 12). Labrum broad, shallowly emarginate to  $1/5$  length. Prosternal collar very short, c. twice shorter than length of second antennal segment. Prosternal process between procoxae broad, moderately expanded apically (fig. 12), apex rhomboidal, its surface smooth and shiny.

Antennae long and thin, extending to the middle of metathorax. Five basal segments glabrous and sparsely pubescent, segment 6 denser pubescent than segment 5 but sparser than segment 7, segments 7-11 dull and densely pubescent. Length ratio of antennal segments: 100:43:37:50:47:40:40:40:37:37:80. First segment elongate, second more than twice shorter, third only slightly shorter than the second (fig. 13).

Legs slim, last segment of tarsi as long as the third. Fore claws with large basal tooth (fig. 14), mid and hind claws with moderately large pecten, extending to  $1/4$  length of claw (fig. 15).

#### TYPES

Holotype and paratype: Chapada, Brazil [Prov. Mato Grosso], Acc. No. 2966, Oct.; two paratypes: same but Nov.; paratype: same but Nov. 10; paratype: same but Chapada, Campo, Oct. (holotype and three paratypes in Carnegie Museum, Pittsburg, USA, two paratypes in the collection of junior author).

#### ACKNOWLEDGEMENTS

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