Genus	Vol. **10** (1): 81-87	Wrocław, 31 III 1999

Cyclosoma (*Monrosiacassis*) *bicostata* n. sp. and notes on *C.* (*M.*) *puberula* (BOH.) (*Coleoptera*: *Chrysomelidae*: *Cassidinae*)

LECH BOROWIEC
Zoological Institute, University of Wrocław, Sienkiewicza 21, 50-335 Wrocław, Poland,
e-mail: cassidae@biol.uni.wroc.pl

ABSTRACT. *Cyclosoma* (*Monrosiacassis*) *bicostata* n. sp. is described from Brazil (Goias, Mato Grosso) and *C.* (*M.*) *puberula* (BOH.) is redescribed.

Key words: entomology, taxonomy, new species, *Coleoptera*, *Chrysomelidae*, *Cassidinae*, *Omocerini*, Neotropics.

The subgenus *Monrosiacassis* of the genus *Cyclosoma* GUÉRIN, 1835 was proposed by VIANA (1964: p. 7) for *Oxynodera sericata* GUÉRIN, 1884 (type species) and *Dolichotoma nigritarsis* BOHEMAN, 1856, *D. puberula* BOHEMAN, 1850 and *Cassida strigata* PANZER, 1798. He did not redescribe these species, but in his work quite good photographs of three species (except *C. puberula*) and examined materials were included. In the material studied recently I found a series of specimens from Brazil (Goias, Mato Grosso) belonging to the new species of the subgenus *Monrosiacassis*. During my stay at the Museum für Naturkunde in Berlin I found holotype of *C. puberula* (BOH.), the only known specimen of this species. Below, the description of *Cyclosoma bicostata*, redescription of *C. puberula* and key to the species of the subgenus *Monrosiacassis* are given.

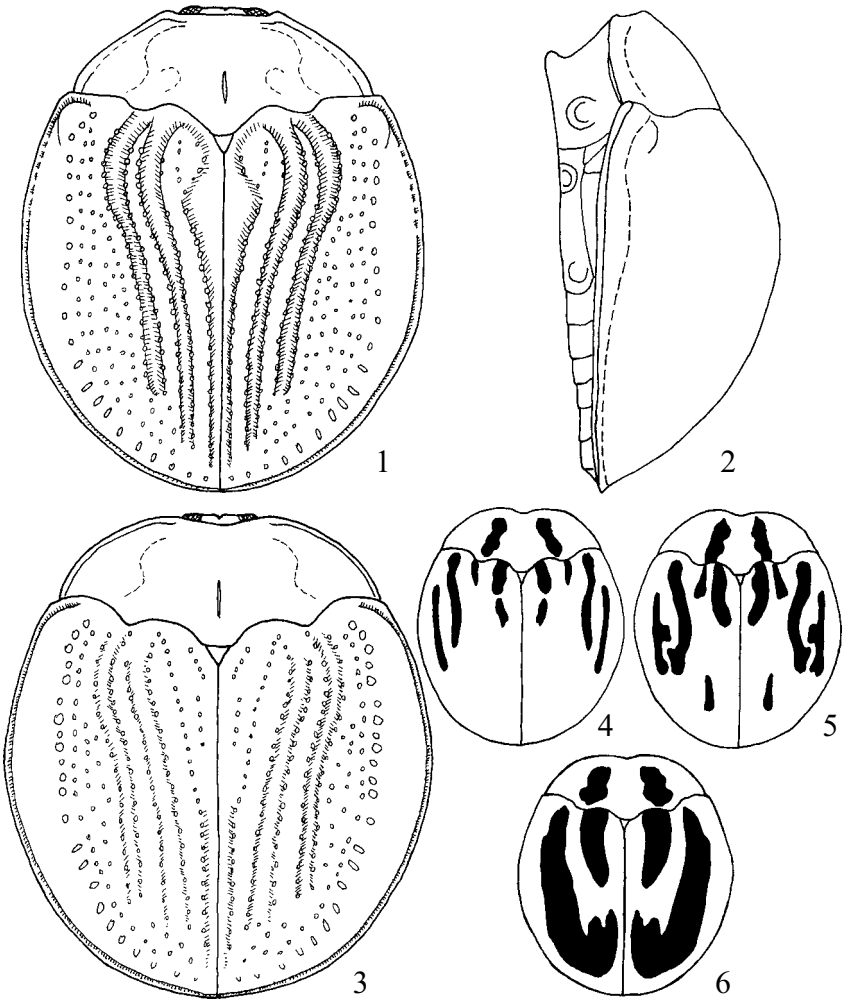
Cyclosoma (*Monrosiacassis*) *bicostata* n. sp.

ETYMOLOGY

Named after two prominent longitudinal costae on each elytron.

DIAGNOSIS

Like *C. sericata* it has sutural interval in postscutellar point widened and convex, but elytral pattern of *bicostata* is more similar to the pattern of *strigata*.



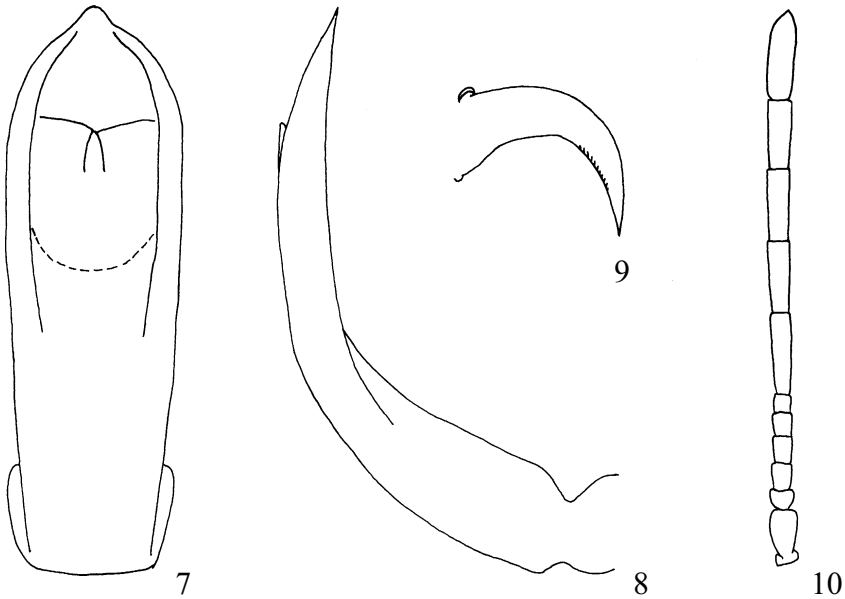
1, 2, 4, 5. *Cyclosoma bicostata*; 3, 6. *C. puberula*: 1, 3 – body in dorsal view, 2 – body in lateral view, 4-6 – dorsal pattern

C. sericata differs in maculate explanate margin of elytra (immaculate in *bicostata*) and very long pubescence on top of elytral and pronotal disc, the longest within the subgenus (in *bicostata* elytral and pronotal pubescence is moderately long, on top of disc distinctly shorter than on sides). *C. nigritarsis* differs in immaculate pronotum and elytra (in *bicostata* pronotum and elytra maculate, only elytra sometimes immaculate) and mostly reduced elytral costae, disappearing within large elytral puncturation (in *bicostata* costae are very distinct and puncturation of elytra distinctly finer than in *nigritarsis*). *C. puberula* has similar elytral pubescence but differs in elytral costae low and indistinct (in *bicostata* distinct) and elytral pattern broad, with dark band along sides of elytral disc (in *bicostata* elytra are at most longitudinally stripped). *C. strigata* is, at first glance, the most similar but differs in sutural interval gradually narrowed from base to apex of disc with no convex area in postscutellar point (in *bicostata* with widened and convex area in postscutellar point). Elytral pubescence in *C. strigata* is distinctly shorter than in *C. bicostata*, especially in flat intervals 1 and 3 and pronotum.

DESCRIPTION

Length: 10.3-14.0 mm, width: 8.9-11.4 mm, length/width ratio: 1.12-1.25. Males only slightly stouter from females.

Pronotum red, with two longitudinal black spots (figs. 4, 5). Elytra red, disc with black stripes (figs. 4, 5): at base of flat interval 2, extending to 1/3-1/2 length of elytron, sometimes divided into two spots; at base of flat interval 4, twice to



7-10. *Cyclosoma bicostata*: 7 – aedeagus, dorsal view, 8 - aedeagus, lateral, 9 – tarsal claw, 10 - antenna

thrice shorter than stripe of interval 2; on flat interval 6, from base to half length of elytron; in the middle of submarginal intervals. Often in 3/4 length of interval 4 there is a short stripe, occasionally in 3/4 length of interval 6 there is a group of black punctures. The pattern can be reduced, in extreme form elytra are almost uniformly red with only infuscate humeral callus. Explanate margin of elytra and costae without black markings. Head and ventrites uniformly red. Legs mostly red, only tarsi and sometimes extreme apices of tibiae brown to black. Antennae black, only ventral side of first segment reddish.

Pronotum trapezial, anterior margin shallowly emarginate. Disc moderately convex, with short median sulcus, impunctate, its surface slightly dull. Sides of disc with shallow impression. Explanate margin indistinctly bordered from disc, flat, impunctate, its surface dull. Whole surface of pronotum, except top of disc, covered by moderately long, sparse, adherent hairs.

Scutellum small, triangular. Base of elytra not, or only slightly wider than base of pronotum. Disc regularly convex (fig. 2). Sutural interval strongly convex, in postscutellar point widened, form a round or rhomboidal convexity. Intervals 3 and 5 strongly convex, form longitudinal costae. Between sutural and third, and between third and fifth intervals there are double, regular rows of large punctures. Intervals 2 and 4 flat. Area between second costa and marginal interval with numerous punctures, partly with tendency to form a rows, partly irregular, c. twice smaller than in rows 1-4. Distance between punctures two to fourth times wider than puncture diameter. Marginal row with punctures c. twice larger than in rows 1-4, in posterior half of the row punctures have tendency to form short, transverse grooves. Explanate margin narrow, almost horizontal, impunctate. Surface of elytra mostly dull, only sutural convexity and costae more or less glabrous. Whole surface, except costae, covered by moderately long, mostly erect hairs, only in intervals 2 and 4 hairs are mostly adherent. In posthumeral part of disc hairs are c. twice longer than on slope. Ventrites typical for the subgenus, prosternal collar prominent, prosternal process with deep impression. Legs strong, claws large, simple (fig. 9). Antennae long, but shorter than in members of other subgenera of Cyclosoma, with six basal glabrous, and five distal dull segments. Segments 2-5 very short, 6-11 very long (fig. 10).

Male genitalia: aedeagus moderately long, slightly narrowed form apex to base, apex with small, obtuse median process (fig. 7), in profile aedeagus regularly curved (fig. 8).

TYPES

Holotype: [Brazil, Mato Grosso]: “Chapada Brazil Acc. No. 2966” “Jan. [uary]”; 4 paratypes: the same locality but “April”; paratype: the same locality but “Oct.[ober]”; 3 paratypes: the same locality but “Nov.[ember]”; 2 paratypes: the same locality but “April” + “Klages coll’n Exot Coleopt CM Acc 2275”; paratype: “Chapada near Cuyaba, Mato Grosso, Brazil” “Klages coll’n Exot Coleopt CM Acc 2275”; paratype: [Brazil, Goias]: “Goyaz Bauer” “*strigata*

Panz. det. Spaeth" (holotype and 7 paratypes at Carnegie Museum of Natural History, Pittsburgh, USA, 5 paratypes in author's collection).

Cyclosoma (*Monrosiacassis*) *puberula* (Boheman, 1850)

Dolichotoma puberula Boheman, 1850: 204; 1856: 33; 1862: 89; Gemminger and Harold, 1876: 3628.
Prenea puberula: Spaeth, 1913: 106; 1914: 26.
Cyclosoma puberula: Blackwelder, 1946: 736.
Cyclosoma (*Monrosiacassis*) *puberula*: Viana, 1964: 106.

Diagnosis

Like *C. strigata* and *C. bicostata* it has dorsal part of body covered by moderately long hairs. It differs from both congeners in only slightly elevated intervals 3 and 5. Its elytral pattern is unique.

Description

Length: 13.7 mm, width: 11.7 mm, length/width ratio: 1.17. Body almost circular (fig. 3).

Pronotum red, with two broad black spots (fig. 6). Elytra red, with only two large, black spots (fig. 6): first between rows 1-3 from base of elytron to almost half of elytral length; second forms a broad band along sides of disc. Explanate margin of elytra without black markings. Head and ventrites uniformly red. Legs mostly red, only tarsi and extreme apices of tibiae blackish. Antennae black, only ventral side of first segment reddish.

Pronotum trapezial, anterior margin shallowly emarginate. Disc moderately convex, with short median sulcus, impunctate, its surface slightly dull. Sides of disc with indistinct impression. Explanate margin indistinctly bordered from disc, flat, impunctate, its surface dull. Whole surface of pronotum, except top of disc, covered by moderately long, sparse, adherent hairs.

Scutellum small, triangular. Base of elytra only slightly wider than base of pronotum. Disc regularly convex. Sutural interval convex only in apical half, in postscutellar only slightly widened, does not form a convexity. Intervals 3 almost flat, interval 5 slightly convex, elytra do not appearing costate. Between sutural and third, and between third and fifth intervals there are double, regular rows of large punctures. Intervals 2 and 4 flat. Area between second costa and marginal interval with numerous irregular punctures, only interval 5 margined externally by regular row of punctures. Distance between punctures two to six times wider than puncture diameter. Marginal row with punctures c. thrice larger than in rows 1-4, in posterior half of the row punctures have tendency to form short, transverse grooves. Explanate margin narrow, almost horizontal, impunctate. Surface of elytra mostly dull, only sutural convexity and costae more or less glabrous. Whole surface, except costae, covered by moderately long (slightly longer than

in the preceding species), mostly erect hairs, only in intervals 2 and 4 hairs are mostly adherent. In posthumeral part of disc hairs are c. twice longer than on slope. Ventrites typical for the subgenus, prosternal collar slightly more prominent than in the preceding species, prosternal process with deep impression. Legs, claws and antennae like in *C. bicostata*.

Genitalia: not dissected, holotype specimen has abdomen inside damaged by anthrenine beetles.

TYPES

Holotype: "*puberula* Bohem Guyana Mor." "11058" (Museum für Naturkunde, Berlin, Germany).

KEY TO THE SPECIES OF THE SUBGENUS *MONROSIACASSIS*

1. Pronotum with spots. Elytra maculate, if not then with two distinct costae ..... 2.
-. Pronotum and elytra immaculate. Elytron with indistinct costae vanished between large punctures ..... *nigritarsis*
2. Explanate margin of elytra immaculate. Surface of pronotum and dorsal part of elytra with very short to moderate hairs ..... 3.
-. Explanate margin of elytra maculate. Whole surface of pronotum and elytra with long hairs ..... *sericea*
3. Elytra with distinct costae. Elytral pattern narrower, forms at least three longitudinal stripes, occasionally elytra uniformly red ..... 4.
-. Elytra with low, indistinct costae. Elytral pattern broad, forms broad stripe in anterior part of elytron and broad band along sides of disc ..... *puberula*
4. Sutural interval in postscutellar point strongly widened and convex, forms circular or rhomboidal convexity. Elytral stripes usually shorter, fifth interval in posterior part without stripe or with only punctures marked with black .... *bicostata*
-. Sutural interval form base to apex of disc gradually narrowed, in postscutellar area does not convex. Elytral stripes usually longer, fifth interval in posterior part with stripe, which is sometimes coalescent with stripe in posterior part of third interval ..... *strigata*

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Dr. R. DAVIDSON (Carnegie Museum) for part of specimens of *C. bicostata* and to Dr. J. SCHULZE (Museum für Naturkunde, Berlin) for the loan of the type of *C. puberula*.

REFERENCES

BLACKWELDER, R. E., 1946. Checklist of the Coleopterous insects of Mexico, Central America, the West Indies, and South America, part 4. Bull. Smithson. Inst. USNM, **185**: 733-757.

BOHEMAN, C. H., 1850. Monographia Cassididarum. Tomus primus. Holmiae, 452 pp. + 4 tab.

-, 1856. Catalogue of Coleopterous Insects in the collection of the British Museum, Part IX, *Cassididae*. London, 225 pp.

-, 1862. Monographia Cassididarum. Tomus quartus. Holmiae, 504 pp.

GEMMINGER, Dr., HAROLD, B. de, 1876. Catalogus Coleopterorum hucusque descriptorum synonymicus et systematicus. Tom XII, Monachii, 3823 + LXXIII pp.

SPAETH, F., 1913. Kritische Studien über den Umfang und die Begrenzung mehrerer Cassiden-Gattungen nebst Beschreibung neuer amerikan. Arten. Archiv F. Naturges., **79**: 126-164.

-, 1914. *Chrysomelidae*: 16. *Cassidinae*. In: W. JUNK, S. SCHENKLING, Coleopterorum Catalogus, Pars 62, Berlin, 182 pp.

VIANA, M. J., 1964. Revision sistematica de las especies Argentinas de „*Omocerini*" SPAETH, y catalogo bibliografico de la tribus. Rev. Mus. Arg. Cien. Nat., **1**: 1-131 + X tab.