

A new species of *Amblycerus* Thunberg, 1815  
(Coleoptera: Bruchidae)  
and a lectotype designation

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## Abstract

A new South American *Amblycerus* Thunberg, *A. sosia* is described and illustrated. Geographic distribution and comments about related species are also presented. A lectotype is designated for *A. centralis* (Sharp, 1885) = *A. cistelinus* (Gyllenhal, 1833).

**Key words:** *Amblycerus*, Bruchidae, Taxonomy.

*Amblycerus sosia*, new species  
Figures 1-9

## Introduction

The Brazilian fauna of *Amblycerus* Thunberg, is being revised. There are approximately 33 valid names registered from this region.

The first attempt to delineate species groups, including Brazilian species, was done by Ribeiro-Costa and Marinoni (1992). The *hoffmanseggi* group, based on phenetic analysis, included: *Amblycerus obscurus* (Sharp), *A. nigromarginatus* (Motschulsky), *A. submaculatus* (Pic) and *A. hoffmanseggi* (Gyllenhal). The last three species are found in Brazil. Ribeiro-Costa (1992) published the redescriptions of these species and of *A. bicolor* (Pic).

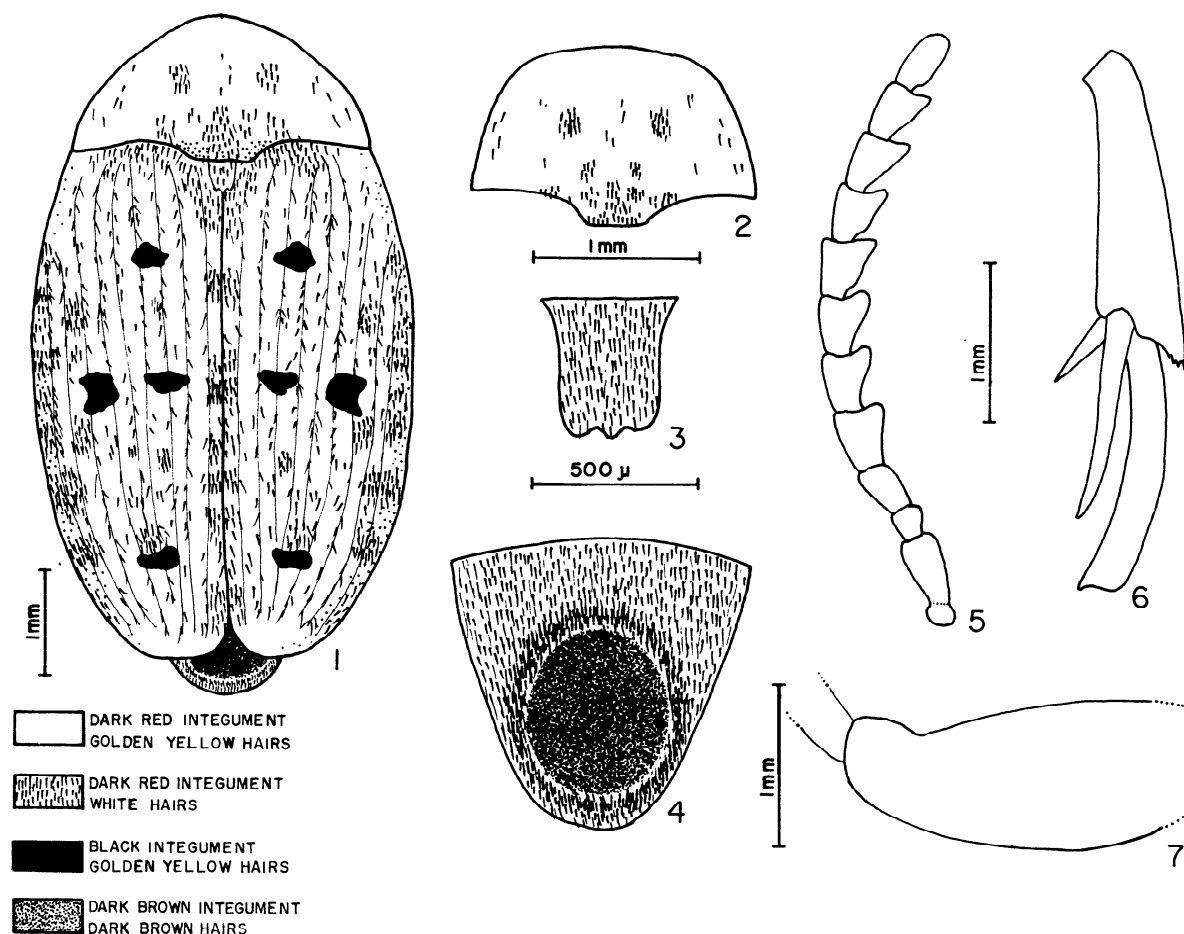
*Amblycerus sosia*, sp.n., belongs to a species group characterized by large size, the pattern on the dorsal surface and a dark spot on the pygidium. In this paper, we propose to describe this species to establish a species name to be used in future grouping arrangements of all Brazilian species of *Amblycerus*.

**DESCRIPTION:** Medium size. Length 8.78mm; width 4.82mm.

**Dimensions:** Pronotum length 1.96 - 2.40mm (x = 2.23mm, n = 15); width 3.32 - 4.12mm (x = 3.65mm, n = 15). Elytron length 5.92 - 7.25mm (x = 6.56, n=15); width 4.33 - 5.25mm (x = 4.82mm, n=15).

**Integument:** Eyes black; antenna dark red. Dorsal surface dark red with scattered black spots on elytra, often with two on basal one-third, four at two-thirds and two in apical one-third (fig. 1). Lateral margins of elytra moderately darker. Venter of body and legs dark red. Pygidium with large, ovate, central, dark brown spot (fig. 4).

**Vestiture:** General coloration on dorsal surface golden yellow, on head white. Pronotum usually with white hairs forming two small, round spots across middle of disk and scattered patches near basal lobe (fig. 2). Scutellum white (fig. 3). Elytra with white hairs in scattered patches along basal margin and around scutellum, often in a few small, irregular spots

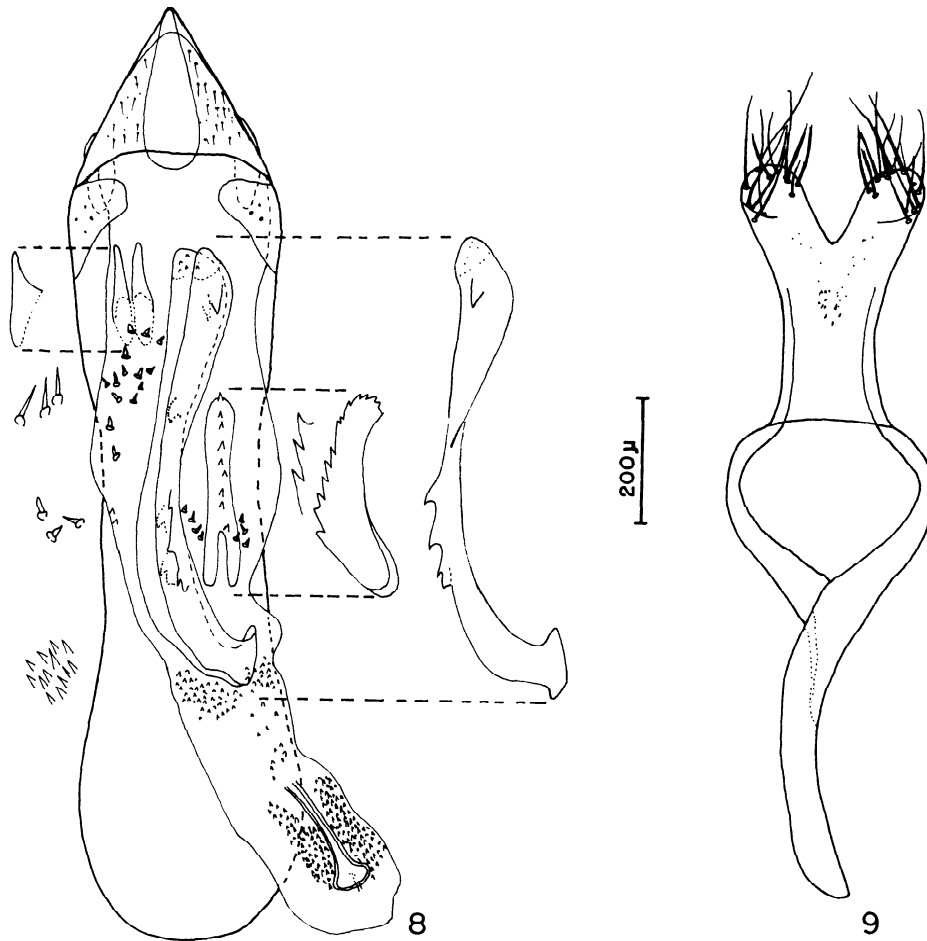


**Figures 1-9.** *Amblycerus sosia*, new species. 1, dorsal habitus; 2, pronotum; 3, scutellum; 4, pygidium; 5, antenna; 6, hind tibia and first tarsal segment; 7, mesal ventral carina of hind femur.

on median and lateral margins, in lines along interstitial margins and striae sulci, and condensed into a few, very small irregular patches on the remainder of the elytra (fig. 1). Pygidium with large, ovate, velvety dark brown spot bordered with dense white hairs (fig. 4). Venter of body mottled brown and white. Abdominal sterna on lateral margins with white hairs gently condensed into round patches.

Body subelliptical. Vertex and frons uniformly micropunctate; frons gently convex with frontal carina evanescent, sometimes absent; clypeus with punctures larger than on frons except on apex; labrum with some punctures like on clypeus only on basal margin. Mesal margin of eye with fine carina and umbilicate punctures; eye coarsely faceted, protruding laterally; ocular sinus 1/5 length of eye and ocular index 4.7:1; postocular lobe narrow. Antenna serrate

from fourth to tenth segments, all perceptibly longer than wide, terminal segment elliptical (fig. 5). Pronotum trapezoidal (fig. 2), lateral margins gently arcuate, apex subtruncate; disk moderately convex; basal lobe briefly sulcate; surface densely punctulate, lateral one-third of disk either side also coarsely punctate; lateral margins bluntly ridged, delimited by a fine dorsal and a ventral sulcus; dorsal sulcus abruptly angulate behind eye and directed into cervical sulcus; cervical boss with three fine setae. Prosternum flat, margins sulcate, apex expanded and fitting into sulcate mesosternum. Scutellum 1.4 times longer than wide, with trilobed apex (fig. 3). Elytra 1.4 times as long as wide, evenly convex except slightly depressed around scutellum; sutural interstices elevated on apex. Metepisternum punctulate; metepisternal sulcus forming an obtuse angle, ante-



**Figures 8-9.** *Amblycerus sosia*, new species. 8, male genitalia, median lobe; 9, same, tegmen and lateral lobes.

rior arm arcuate, reaching dorsal margin, longitudinal arm often not reaching middle length of metepisternum. Metasternum between middle coxa not bulging. Face of hind coxa in distal two-thirds, setose and punctulate, sparsely punctate; proximal one-third glabrous and impunctate, except for cluster of punctures near trochanteral insertion. Hind femur subparallel in basal three-fourths, sinuate toward apex; ventral face slightly sulcate with bicarinate margins; lateroventral carina lacking blunt, angulate process near apex (fig. 7). Hind tibia lacking carinae; inner distal two-thirds with tumidity; apex with a few coronal teeth (fig. 6). Mesal tibial spur 0.27 length of lateral spur and 0.34 length of first hind tarsal seg-

ment. Male pygidium vertical, female pygidium oblique; male eighth tergite acute. Abdomen unmodified.

**Male genitalia** (figs. 8, 9). Median lobe with ventral and dorsal valves triangular. Internal sac armature consisting of two basal spine-shaped sclerites, two times as long as wide; two long, laminar and median sclerites each with angulate basal portion and each one often with one tooth near apex and four on median portion; unpaired, median sclerite slightly sinuate toward apex in lateral view, with serrate dorsal margin; apical sclerite with long stems. Internal sac membrane with denticles on basal portion and shorter and numerous on median portion (fig. 8). Lateral lobes with deep cleft (fig. 9).

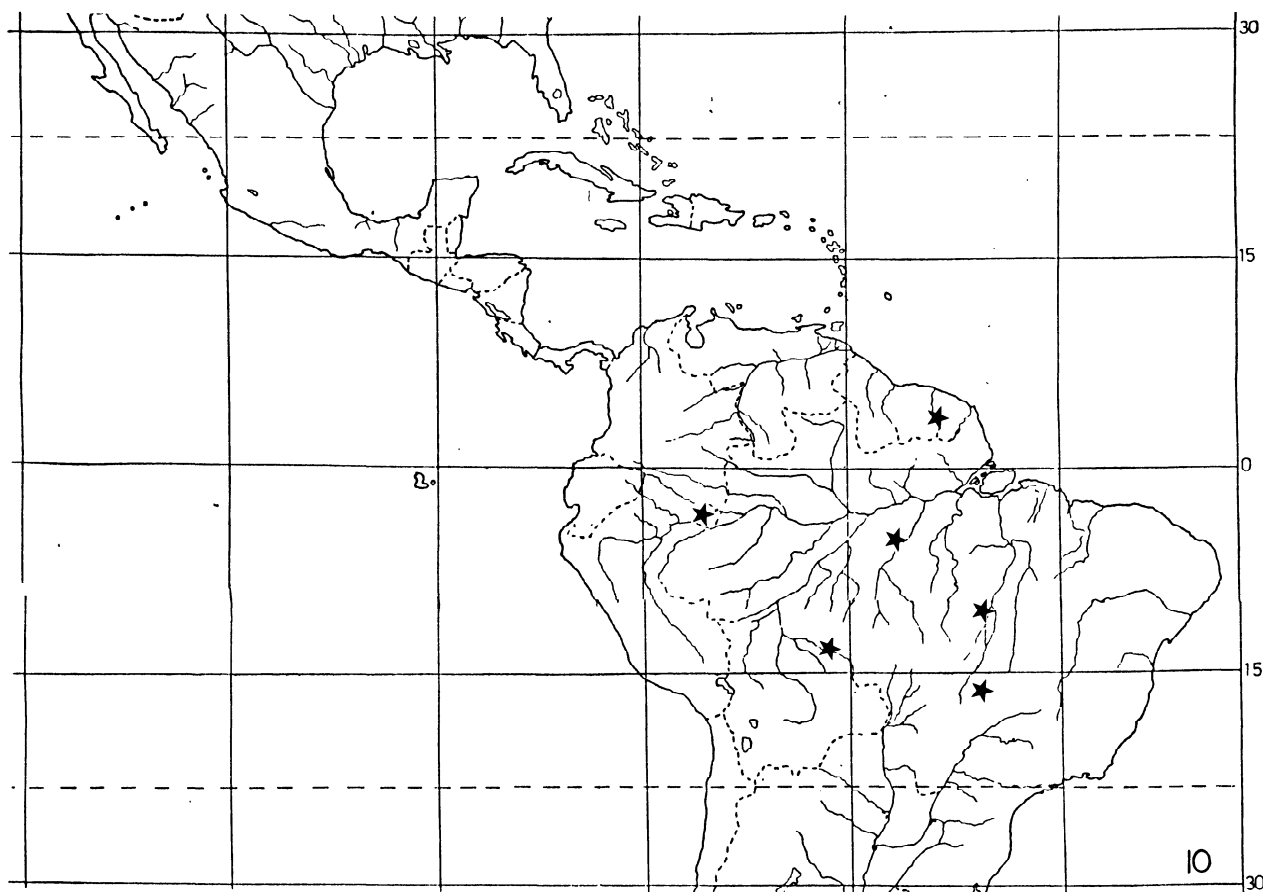


Fig.10. *Amblycerus sosia*, new species. Geographic distribution.

#### Intraspecific variations.

**Integument.** Antenna dark red or black. Dorsal surface light or dark red, with variable number of black spots; ventral surface light red or very dark.

**Vestiture.** General coloration on dorsal surface golden or light yellow. Pronotum lacking round white spots or with two, four or six spots. Elytra with faint white spots on median and lateral margins. Abdomen with or without round white patches on lateral margins. Pygidium sometimes with faint brown patches on lateral anterior areas.

Scutellum with median lobe slightly longer than the lateral lobes. Metepisternum with some punctures; longitudinal arm of metepisternal sulcus reaching middle length of metepisternum, or not. Hind tibia without a tumidity on inner distal two-thirds.

**Male genitalia.** Dorsal valve with slightly rounded apex. Spine-shaped basal sclerites placed on

right or left side of laminar sclerites. Each long, median, laminar sclerite with two, three, four, six or eight teeth, usually one or two on apex and the rest toward base. Unpaired sclerite with one or two serrate lines on dorsal margin, usually placed medial or sometimes beside laminar sclerites.

**Holotype male** - BRAZIL: Pará, Jacarecanga; IV-1969; F.R. Barbosa; (MZSP). Allotype, BRAZIL: Mato Grosso, Barra do Tapirapé, 6 I-63, B. Malkin (CAS); one male paratype with same label (CAS), another five with same locality, except dates 2-16.I.1966, two males and three females 19-22.I.64 (MZSP); additional paratypes. - FRENCH GUIANA: Maroni River, Collection Wm. Schaus, 4 ex (USNM). COLOMBIA: Leticia, Amazonas 700', 1 ex, 10-VII-1970, H & A. Howden (HFH); BRAZIL: Porto Velho, Guaporé, 1 ex, XI-1954, F. Pereira, Werner, Oente, M. Alvarenga;

Coleção Campos Seabra (MNRJ); Goiás, Mineiros, 1 ex, (Paris- JMK handwriting.)

Holotype deposited in the Museu de Zoologia de São Paulo. Allotype and one paratype deposited in the California Academy of Sciences, San Francisco. Other paratypes deposited in the Museu de Entomologia do Departamento de Zoologia da Universidade Federal do Paraná, Curitiba; the Museu de Zoologia de São Paulo, São Paulo; the Museu Nacional do Rio de Janeiro, Rio de Janeiro; the National Museum of Natural History, Washington; and H.F. Howden Collection, Ottawa, Canada.

### Discussion.

*Amblycerus sosia* is closely related to *A. cistelinus* (Gyllenhal), *A. jatayensis* (Pic) and *A. whiteheadi* Kingsolver. Dorsal and pygidial color pattern of integument and vestiture are very similar in these species. The male genitalia features are diagnostic, although similar in number and disposition of sclerites. *Amblycerus sosia* can be distinguished from them mainly because of the triangular dorsal valve, short spine-shaped basal sclerites, median laminar sclerites with teeth and an unpaired median sclerite with serration along dorsal margin. *Amblycerus cistelinus* and *A. jatayensis* each have the unpaired median sclerite with serration only on the apex and both can be distinguished by the shape and length of basal sclerites: Y-shaped in *A. cistelinus* and long, spine-shaped in *A. jatayensis*. *Amblycerus whiteheadi* has the median laminar sclerites smooth, lacking denticles and dorsal valve subovate.

### Geographic Distribution (fig. 10)

This species is found in French Guiana, Colombia and Brazil. There are two localities in Brazil, Barra do Tapirapé (Mato Grosso) and Jataí (Goiás), in which *A. sosia* is sympatric with a closely related species, *A. jatayensis*. Despite the sympatry of *A. sosia* with *A. jatayensis*, both very similar in external characters, until now there is no evidence to consider them as a single species. The most important genitalic characters are constant in specimens of each species, not varying in cline.

**Etymology.** This species is named because its external characters are similar to those of *A. cistelinus*, *A. jatayensis* and *A. whiteheadi* (*sosia*, a noun in apposition = counterpart (Portuguese)).

### *Amblycerus centralis* (Sharp)

When Sharp (1885:500) described *A. centralis* he commented "This species agrees in many respects with Gyllenhal's description of *S. cistelinus*, but..." Following examination of the respective type-series,

Kingsolver and Silva (1991:414) synonymized *A. centralis* with *A. cistelinus*. From the type-series, the lectotype of *A. centralis*, from San Geronimo, Guatemala, deposited in the British Museum (Natural History) is hereby designated. Many characters were analysed, including male genitalia, and were compared with those of *A. cistelinus*. The unique differences observed were on an intraspecific level.

### Acknowledgments

We would like to thank Dr. Renato C. Marinoni for suggestions and revision and also to Dra. Sharon L. Shute from British Museum for the loan of a type specimen. This is Contribution No. 737 from Departamento de Zoologia, Universidade Federal do Paraná, Curitiba, Brazil.

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