

Taxonomic notes on *Amblycerus* Thunberg, 1815 (Coleoptera: Bruchidae)

John M. Kingsolver

Florida State Collection of Arthropods
Division of Plant Industry
P. O. Box 147100
Gainesville, Florida, 32614-7100, USA

and

Cibele S. Ribeiro-Costa

Departamento de Zoologia
Universidade Federal do Paraná
C. P. 19.020; 81.531-990
Curitiba, Paraná, Brasil

Abstract: The following changes in nomenclature of some species of *Amblycerus* Thunberg, 1815, are proposed: A) Elevated to new taxonomic status- *A. insuturatus* (Pic, 1902) from (*Spermophagus subflavidus* var. *insuturatus*); *A. luteolineatus* (Pic, 1929) from (*Spermophagus luteonotatus* var. *luteolineatus*); *A. paulonotatus* (Pic, 1906) from (*Spermophagus luteonotatus* var. *paulonotatus*). B) New synonymy- *A. dispar* (Sharp, 1885)(= *Spermophagus longissimus* Pic, 1902; = *S. caryoboriformis* Pic, 1910; = *S. guyanensis* Pic, 1917; *S. piceosuturalis* Pic, 1927; = *S. caracasensis* Pic, 1954); *A. gounellei* (Pic, 1902)(= *S. curtus* Pic, 1911; = *S. basipennis* Pic, 1936); *A. insuturatus* (Pic, 1902)(= *A. wolcotti* Kingsolver, 1970); *A. jataicensis* (Pic, 1902)(= *S. jataicensis* var. *bicoloriceps* Pic, 1955; = *S. jataicensis* var. *hahneli* Pic, 1955); *A. multimaculatus* (Pic, 1902)(= *S. minasensis* Pic, 1918); *A. perfectus* (Sharp, 1885)(= *S. maculatopygus* Pic, 1927); *A. reticulatus* (Jekel, 1855)(= *S. rufotestaceus* Pic, 1912); *A. luteolineatus* (Pic, 1929)(= *S. multisignatus* Pic, 1954). C). Lectotype/s and paralectotype/s are designated for: *S. luteonotatus* Pic, 1902; *S. multimaculatus* Pic, 1902; *S. maculatopygus* Pic, 1927; *S. subflavidus* Pic, 1902; *S. trisignatus* Sharp, 1885; *S. jataicensis* Pic, 1902; *S. longissimus* Pic, 1902; *S. caryoboriformis* Pic, 1910; *S. dispar* Sharp, 1885; *S. subflavidus* var. *insuturatus* Pic, 1902. For all species listed in this paper, we provide a bibliography, label data on type material, sex of types and their repository.

Key words: *Amblycerus*, Bruchidae, taxonomy.

Introduction

In order to revise the genus *Amblycerus* Thunberg, 1815, type material belonging to the Natural History Museum, London (MNHL), Muséum National d'Histoire Naturelle, Paris (MNHN) and National Museum of Natural History, Washington (NMNH), was examined. The results indicate the necessity of changes in nomenclature, such as new synonyms, new taxonomic status, and new combinations.

Abbreviations used are: biol. = biology; cat. = catalog listing; cit. = citation; desc. = description; distr. = distribution; host pl. = host plant; imat. = immature description; term. = terminalia.

Amblycerus dispar (Sharp, 1885)

Spermophagus dispar Sharp, 1885:494 (desc., distr.); Pic, 1913:59 (cat., distr.).

Amblycerus dispar: Blackwelder, 1946:762 (cat., distr.); Johnson and Kingsolver, 1982:410 (cat., distr.); Udayagiri and Wadhi, 1989:9 (cat., distr.).

Spermophagus longissimus Pic, 1902:172 (desc., distr.); Pic, 1913:60 (cat., distr.); Bondar, 1931:59 (host pl., biol.); Bondar, 1937:32 (host pl., biol.); Zacher, 1952:468 (host pl.). **New Synonymy.**

Amblycerus longissimus: Blackwelder, 1946:762 (cat., distr.); Costa Lima, 1955:249 (host pl.); Silva et.al., 1968:376 (host pl.); Johnson and Kingsolver, 1975:328 (cit.); Udayagiri and Wadhi, 1989:11 (cat., distr., host pl.); Kingsolver and Silva, 1991:414 (cit.).

Spermophagus caryoboriformis Pic, 1910:110 (desc., distr.); Pic, 1913:58 (cat., distr.); Pic, 1927a:13 (cit.); Bosq, 1942:46 (distr., host pl.). **New Synonymy.**

Amblycerus caryoboriformis: Blackwelder, 1946:762 (cat., distr.); Terán and Muruaga de L'Argentier, 1979:436 (desc., desc. imat., desc., term. male, biol., host pl., distr.); Terán and Muruaga de L'Argentier, 1981:68 (cit.); Muruaga de L'Argentier, 1983:99 (cit.); Terán, 1984:211, 213 (cit.); Udayagiri and Wadhi, 1989:8 (cat., distr.); Kingsolver, 1990:50 (cit.).

Spermophagus thomasi Brèthes, 1925:203 (desc., distr.); Udayagiri and Wadhi, 1989:30 (cat., distr., host pl.); Kingsolver, 1990:50 (distr., syn.).

Spermophagus guyanensis Pic, 1917:302 (desc., distr.).
New Synonymy.

Amblycerus guyanensis: Blackwelder, 1946:762 (cat., distr.); Udayagiri and Wadhi, 1989:10 (cat., distr.).

Spermophagus piceosuturalis Pic, 1927:13 (desc., distr.). New Synonymy.

Amblycerus piceosuturalis: Blackwelder, 1946:763 (cat., distr.); Udayagiri and Wadhi, 1989:13 (cat., distr.).

Spermophagus caracasensis Pic, 1954:16 (desc., distr.).
New Synonymy.

Two specimens were studied (1♂ and 1♀) of *Spermophagus dispar*, both on the same pin and deposited in the MNHL. The labels with the specimens are: 1) Lectotype, [round with blue margin]; 2) Type [round with red margin]; 3) Caldera, Panamá. Champion [white]; 4) B. C. A. Col.V. *Spermophagus dispar*, Sharp. [white]; 5) Sharp Coll.1905.-313. [white]; Lectotype ♂, *Amblycerus dispar*(Sharp,1885), C. S. Ribeiro-Costa, det.1994 [red]; Paralectotype ♀, *Amblycerus dispar* (Sharp,1885), C. S. Ribeiro-Costa, det.1994 [red]. The ♂ was selected as lectotype and the ♀ as paralectotype. In the original description of *A.dispar*, Sharp (1885) listed 12 specimens from Caldera, 8 from David and 1 or 2 from Bugaba and 1 or 2 from San Lorenzo, all of them from Chiriquí Province.

The syntypic series of *Spermophagus longissimus* was examined and consists of 1♂ and 1♀, both deposited in the MNHN. Their labels are: 1) Brésil, Gounelle, [white]; 2) Type, [yellow]; 3) *longissimus* Pic, [white]; 4) Lectotype [by Kingsolver]. The ♂ was selected as a lectotype and the ♀ as a paralectotype.

The syntypic series of *Spermophagus caryoboriformis* (2♂, 4♀), deposited in the MNHN, was studied and the lectotype (♀) and 2♂ and 3♀ paralectotypes selected. The specimens have the following data in the label: Republ. Argentine, Chaco de Santiago del Estero, Rio Salado.

Spermophagus thomasi Brèthes was synonymized by Kingsolver (1990:50) based on the description and on the host plant, "Chañar", (*Geoffroea decorticans* (Hook. and Arn.). The type presumably is in Brèthes' collection in the Museo Argentino de Ciencias Naturales Bernardino Rivadavia, Bueno Aires. It has not been examined.

The holotype (♀) of *Spermophagus guyanensis* and the 2♀ paratypes were examined. The information on each of the labels of this material is:

Guyanne Française, Roches de Kourou, Janviers, Coll. Le Moult. The type material is deposited in the MNHN.

The type series of *Spermophagus piceosuturalis* (holotype ♀ and 2♂ and 4♀ paratypes) was examined. The type series deposited in the MNHN has the same label information as the type series of *Spermophagus guyanensis*.

The holotype (♂) of *Spermophagus caracasensis*, deposited in the MNHN, was examined. Its labels read: 1) Caracas, Venezuela, [white]; 2) type, [orange]; 3) *caracasensis* n.sp., [white].

Amblycerus gounellei (Pic, 1902)

Spermophagus gounellei Pic, 1902:172 (desc., distr.); Pic, 1913:59 (cat., distr.).

Amblycerus gounellei: Blackwelder, 1946:762 (cat., distr.); Udayagiri and Wadhi, 1989:10 (cat., distr.).

Spermophagus curtus Pic, 1911:151 (desc., distr.); Pic, 1913:59 (cat., distr.). New Synonymy.

Amblycerus curtus: Blackwelder, 1946:762 (cat., distr.); Udayagiri and Wadhi, 1989:9 (cat., distr.).

Spermophagus basipennis Pic, 1936:14 (desc., distr.).
New Synonymy.

Amblycerus basipennis: Blackwelder, 1946:762 (cat., distr.); Udayagiri and Wadhi, 1989:8 (cat., distr.).

The following holotypes deposited in the MNHN were examined: Holotype (♂) of *A. gounellei* with the label: Matusinhos (Minas), Bresil, E. Gounelle, 3.4.1885; holotype of *A. curtus* with the label: Bahia, Brasilia (this specimen is in part damaged by dermestids and its sex is undetermined); holotype (♂) of *A. basipennis* with the label: Brazil, Bahia, Dr.G.Bondar.

Amblycerus insuturatus (Pic, 1902), new status

Spermophagus subflavidus var. *insuturatus* Pic, 1902:172 (desc., distr.); Pic, 1913:62 (cat., distr.).

Amblycerus subflavidus var. *insuturatus*: Blackwelder, 1946:763 (cat., distr.); Udayagiri and Wadhi, 1989:13 (cat., distr.).

Amblycerus wolcotti Kingsolver, 1970:480 (desc., distr., key, host pl., term. male); Johnson and Kingsolver, 1982:411 (cat., distr.); Udayagiri and Wadhi, 1989:17 (cat., distr., type, host pl.). New Synonymy.

Two syntypes (♂♂) of *Spermophagus subflavidus* var. *insuturatus*, deposited in the MNHN, were examined and the lectotype and paralectotype are here designated. Each specimen bears the identical label: "Brésil (Gounelle)". The variety *insuturatus* can be differentiated from *S.subflavidus* (syn-

onym of *S. pollens* Sharp) by the absence of a transversely striate area on the metepisternum, scutellum conspicuously tridentate, hind femur about 2.5 times as long as width, and lateral hind tibial spur about 2 times as long as the median spur. Consequently, *S. subflavidus* var. *insuturatus* is elevated to species level.

The holotype (♂) of *A. wolcotti*, deposited in the NMNH and from Porto Rico, was examined. The labels are: 1) Luquillo Ins. Forest, Dec.1943, Acc.#62-43 [white]; 2) Host: *Buchenaria capitata* seeds, [white]; 3) L. F. Martorell, Collector, [white]; 4) Type No.69944, USNM, [white]; 5) Holotype, *Amblycerus wolcotti* Kingsolver, [white].

Amblycerus jatayensis (Pic, 1902)

Spermophagus jatayensis Pic, 1902:172 (desc., distr.). *Amblycerus jatayensis*: Blackwelder, 1946:762 (cat., distr.); Udayagiri and Wadhi, 1989:11 (cat., distr.).

Spermophagus jatayensis var. *hahneli* Pic, 1955:3 (desc., distr.). **New Synonymy.**

Spermophagus jatayensis var. *bicoloriceps* Pic, 1955:3 (desc., distr.). **New Synonymy.**

The syntypic series of *Spermophagus jatayensis* was examined and the lectotype (♂) is here designated. The lectotype is labeled: Jatahy, Prov. Goyas, Bresil, Sept. a Nov.97, [green]. From the 9 paralectotypes selected, 8 (1♂ and 7♀) have the same label as the lectotype and only 1 (♀) has the label: Brésil, Gounelle, Le Natur.#369, (1902), p.172, [white].

The type series of the *hahneli* variety of *Spermophagus jatayensis* consists of 1♂ and 1♀. The ♀ holotype has the following labels: 1) Faro, Amazonas, (Hahn), [white], 2) pygidium maculit, [white]; 3) Type, [orange]; 4) *hahneli*, n.sp., [white]. The paratype male has the labels: 1) Dr.Hahn Amazonas [white]; 2) v. *hahneli*, Pic, [white].

The holotype (♂) of the *bicoloriceps* variety of *S. jatayensis* has the labels: 1) Type, [orange]; 2) v. *bicoloriceps*, mihi [white].

All of the type material for *A. jatayensis* is deposited in the MNHN.

Amblycerus luteolineatus (Pic, 1929), new status

Spermophagus luteonotatus var. *luteolineatus* Pic, 1929:28 (desc., distr.); Udayagiri and Wadhi, 1989:25 (cat., distr.).

Amblycerus luteonotatus var. *luteolineatus*: Blackwelder, 1946:762 (cat., distr.).

Spermophagus multisignatus Pic, 1954:16 (desc., distr.).

A specimen, presumed to be the type, of *Spermophagus luteonotatus* var. *luteolineatus*, has the following labels: 1) Bresil, Goyaz, rio Verde, [white]; 2) Type, [orange]; 3) *luteolineatus* n. sp., however, the characters observed for this specimen were not the same quoted by Pic (1929) in the original description and the locality also does not correspond. It suggests that Pic probably labeled the specimen erroneously. The validity of this specimen as the type of *Spermophagus luteonotatus* var. *luteolineatus* needs further study. This material was requested a second time from the Paris Museum, but could not be located. Later, another specimen from MNHN, was studied which had the locality and characters matching those quoted by Pic (1929). The labels of this specimen are: 1) Brazil, Bahia, 1928, 1245, Dr. G. Bondar, [white]; 2) Museum Paris, Coll. M. Pic, [green]; 3) v. *luteonotatus*, Pic, [white]; 4) *luteonotatus* var., Pic, [white]; 5) *luteonotatus* v. *luteolineatus* Pic, det. 70, J.M.Kingsolver [white]; 6) *Amblycerus luteolineatus* (Pic), det 75, J. M. Kingsolver, [white]; 7) *luteolineatus* Pic, det. 75, J. M. Kingsolver.

The variety *luteolineatus* of *Spermophagus luteonotatus* is elevated to species level because it is different from *A. luteonotatus* (Pic, 1902) by the following characters: elytral integument of *luteolineatus* is reddish yellow with elongated golden stripes and elongated brown spots whereas that of *luteonotatus* is dark brown with elongated golden spots; prosternal process extends to mesosternum in *luteolineatus*, whereas in *luteonotatus* it extends to the metasternum.

The holotype (♀) of *S. multisignatus* was studied by J.M.Kingsolver who returned it to the MNHN. The specimen was later requested on loan for study by the second author, C.S.Ribeiro-Costa, but it was lost in the mail in transit to Brazil. The holotype labels were: 1) Tarapoto, Mai aut 1886, M. de Mathan, [white]; 2) type [orange]; 3) *multisignatus* n.sp., [yellowish white]; 4) holotype [red]. No alternate specimen is available for a neotype designation.

Amblycerus luteonotatus (Pic, 1902).

Spermophagus luteonotatus Pic, 1902:172 (desc., distr.); Pic, 1913:60 (cat., distr.); Bondar, 1931:59 (biol., host pl., redesc.); Bondar, 1937:34 (biol., host pl., redesc.); Guérin, 1953:179 (desc.); Zacher, 1952:468 (host pl.); Udayagiri and Wadhi, 1989:25 (cat., distr.).

Amblycerus luteonotatus: Blackwelder, 1946:762 (cat., distr.); Costa Lima, 1955:249 (host pl.); Silva et al.,

1968:376 (host pl., distr.); Kingsolver and Silva, 1991:414 (cit.).

The type series of *Spermophagus luteonotatus* (3 and 1) was studied and a lectotype (σ) is here designated. The lectotype has the labels: 1) Brésil (Gounelle), [white]; 2) Type, [orange]; 3) Museum Paris, Coll. M. Pic, [green]; 4) *spectabilis* Shp., illegible letters, [white]; 5) Lectotype, [red]; 6) *luteonotatus* Pic, det.70, J. M. Kingsolver, [white]; 7) *Amblycerus luteonotatus* (Pic) det.75, J.M.Kingsolver. The paralectotypes also have the label: Brésil (Gounelle). The type material is deposited in the MNHN.

A manuscript label on the lectotype pin of *A. luteonotatus* reads: "spectabilis Sharp". Comparison with the holotype of *spectabilis* revealed that it is not related to *A. luteonotatus*, and is obviously a misidentification.

***Amblycerus multimaculatus* (Pic, 1902).**
Spermophagus multimaculatus Pic, 1902:172 (desc., distr.).
Amblycerus multimaculatus: Blackwelder, 1946:763 (cat., distr.); Udayagiri and Wadhi, 1989:12 (cat., distr.).
Spermophagus minasensis Pic, 1918:8 (desc., distr.); Udayagiri and Wadhi, 1989:25 (cat., distr.). New Synonymy.

The syntypic series of *Spermophagus multimaculatus* (2 and 1) was studied and the lectotype (σ) selected. The lectotype labels are: 1) Brésil (Gounelle), [white]; 2) Type, [yellow]; 3) Museum Paris, Coll. M. Pic [green]; 4) lectotype [red]; 5) *multimaculatus*, Pic, [white]; 6) *Amblycerus multimaculatus* (Pic) det.75, J. M. Kingsolver, [white]; 7) Lectotype [written in red], *Spermophagus multimaculatus*, Pic, by Kingsolver, 1975. The paralectotypes also have the label: Brésil (Gounelle). The type material is deposited in the MNHN.

The holotype (σ) of *Spermophagus minasensis*, has the label data: Brésil (Minas), Campos de Diamantina, Faz. do Riacho Fundo, E.Gounelle, 12 1902. It was examined by J. M. Kingsolver who returned it to the MNHN. C. S. Ribeiro-Costa, later requested the holotype for study but it was lost in the mail in transit to Brazil.

***Amblycerus paulonotatus* (Pic, 1906), new status**

Spermophagus luteonotatus var. *paulonotatus* Pic, 1906:3 (desc., distr.); Udayagiri and Wadhi, 1989:25 (cat., distr.).
Amblycerus luteonotatus var. *paulonotatus*: Blackwelder, 1946:762 (cat., distr.).

The holotype of *A. luteonotatus* var. *paulonotatus* deposited in the MNHN was examined. The labels are: 1) (prob.) L'Échange, no.253 (handwritten, illegible), 1906 p.3, [white]; 2) n.sp., [white]; 3) Caraça, (Minas Geraez), Brésil, E. Gounelle, 1.2.1885, [white]; 4) *luteonotatus* v.*paulonotatus*, Pic, [white]; 5) *luteonotatus* v.*paulonotatus* Pic, det.70, J. M. Kingsolver, [white]; 6) Type, [white]; 6) Holotype, [red]; 7) Museum Paris, Coll. M.Pic, [green].

The *paulonotatus* variety of *Spermophagus luteonotatus* (Pic, 1902) can be distinguished from *A. luteonotatus* by a different distribution of fulvous dorsal vestiture, elongated scutellum, prosternal process reaching mesosternum and subequal hind tibial spurs. These characters are sufficient to elevate the varietal name *paulonotatus* to the specific level.

***Amblycerus perfectus* (Sharp, 1881)**

Spermophagus perfectus Sharp, 1885:498 (desc., distr.); Sharp, 1885:499 (cit.); Pic, 1913:60 (cat., distr.).
Amblycerus perfectus: Blackwelder, 1946:763 (cat., distr.); Janzen, 1977:418 (host pl.); Janzen, 1978:183 (host pl.); Janzen, 1980:947 (host pl.); Luca, 1980:40 (cit.); Kingsolver, 1980:235 (cit., distr.); Johnson and Kingsolver, 1982:410 (cat., distr.); Udayagiri and Wadhi, 1989:12 (cat., distr.).
Spermophagus maculatopygus Pic, 1927:187 (desc., distr.). New Synonymy.

Amblycerus maculatopygus: Blackwelder, 1946:762 (cat., distr.); Udayagiri and Wadhi, 1989:11 (cat., dist.).

The holotype (φ) of *A. perfectus* has the label: Tehuantepec, México, Sallé. This specimen is deposited in the NHML.

The syntypic series (2 φ and 1 σ) of *Spermophagus maculatopygus* was studied; each specimen has the label: Cuyaba, Mtt. Grosso. A lectotype (φ) and the paralectotypes are here designated. The type material is deposited in the MNHN.

***Amblycerus pollens* (Sharp, 1885)**

Spermophagus pollens Sharp, 1885:495 (desc., distr.); Pic, 1913:61; cat.).
Amblycerus pollens: Blackwelder, 1946:763 (cat., distr.); Johnson and Kingsolver, 1982:410 (cat., distr.); Udayagiri and Wadhi, 1989:13 (cat., distr.).
Spermophagus subflavidus Pic, 1902:172 (desc., distr.); Pic, 1913:62 (cat., distr.).
Amblycerus subflavidus: Blackwelder, 1946:763 (cat., distr.); Kingsolver, 1976:151 (syn.); Johnson and Kingsolver, 1982:410 (cat., distr.); Udayagiri and Wadhi, 1989:13 (cat., distr.).

The holotype of *A. pollens*, deposited in the NHML, was examined and has the following labels: 1) *Spermophagus pollens*. Type. D. S., Belize., Blancaneaux, [white]; 2) Type, [white with red margin]; 3) Belize. Blancaneaux, [white]; 4) B. C. A., Col.V., *Spermophagus pollens* Sharp., [white].

The syntypes of *Spermophagus subflavidus* (3♂) were also examined, each one with the label: Brésil, (Gounelle). The lectotype and paralectotypes are here designated. This material is deposited in the MNHN.

Amblycerus reticulatus (Jekel, 1855)

Spermophagus reticulatus Jekel, 1855:135 (desc., distr.); Gemminger and Harold, 1873:3218 (cat.); Pic, 1913:61 (cat.).

Amblycerus reticulatus: Blackwelder, 1946:763 (cat., distr.); Costa Lima, 1955:249 (host pl.); Silva et al., 1968:376 (host pl., distr.); Udayagiri and Wadhi, 1989:14 (cat., distr.).

Spermophagus rufotestaceus Pic, 1912:69 (desc., distr.); Pic, 1913:61 (cat., distr.). **New Synonymy.**

Amblycerus rufotestaceus: Blackwelder, 1946: 763 (cat., distr.); Udayagiri and Wadhi, 1989:14 (cat., distr.).

The *A. reticulatus* holotype, deposited in the NHML, was examined and bears the labels: 1) 53271, Type, Br.Mus., Brasilia; 2) *Spermophagus reticulatus* Jek. Ins. Saund.

The holotype (♀) of *A. rufotestaceus*, was examined and is deposited in the MNHN. The label is: Rio de Janeiro, (an Tiere Angustalis).

Amblycerus trisignatus (Sharp, 1885).

Spermophagus trisignatus Sharp, 1885:498 (desc.); Pic, 1913:62 (cat.).

Amblycerus trisignatus Blackwelder, 1946:762 (cat.); Johnson and Kingsolver, 1982:411 (cat., distr.); Udayagiri and Wadhi, 1989:16 (cat., distr.).

One of six syntypic specimens of *Spermophagus trisignatus* was examined and selected as lectotype. It is deposited in the NHML and has the labels: 1) Cubilguitz, Vera Paz, Champion; 2) Type (round with red margin); 3) Lectotype (round with blue margin); 4) Sharp Coll. 1905-313, 5a. BCA Col.V.; 5) *Spermophagus trisignatus* Sharp [white]; 6) Lectotype, *Amblycerus trisignatus* (Sharp, 1885), C.S. Ribeiro-Costa, det. 1993 [red]. As quoted in the original description of this species there are 5 more type specimens that are here designated as paralectotypes.

Amblycerus unimaculatus (Pic, 1955), new combination

Spermophagus unimaculatus Pic, 1955:3 (desc., distr.)

The type material of *Spermophagus unimaculatus* (2♀, 1♂) is deposited in the MNHN. The labels of the holotype () are: 1) Caracas, Venezuela, [white]; 2) type [orange]; 3) *unimaculatus* n.sp. [white]. The paratypes (1♀, 1♂) are identically labeled except for the type label.

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