

# Revision of the genus *Cosmotomidius* Melzer (Coleoptera, Cerambycidae, Lamiinae)

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**ABSTRACT.** Revision of the genus *Cosmotomidius* Melzer (Coleoptera, Cerambycidae, Lamiinae). *Cosmotomidius* Melzer, 1931 is revised and transferred from Acanthocinini to Acanthoderini. *Cosmotomidius vincus* new species is described from Bolivia (Santa Cruz). *Cosmotomidius setosus* is recorded from the states of Bahia, Mato Grosso, Goiás and Minas Gerais in Brazil, and also from Bolivia.

**KEYWORDS.** Acanthocinini; Acanthoderini; Cerambycidae; new species; new records.

**RESUMO.** Revisão do gênero *Cosmotomidius* Melzer (Coleoptera, Cerambycidae, Lamiinae). *Cosmotomidius* Melzer, 1931 é revisto e transferido de Acanthocinini para Acanthoderini. *C. vincus* nova espécie é descrita da Bolívia (Santa Cruz) e *Cosmotomidius setosus* é registrado para Bahia, Mato Grosso, Goiás e Minas Gerais no Brasil, e para a Bolívia.

**PALAVRAS-CHAVE.** Acanthocinini; Acanthoderini; Cerambycidae; espécie nova; novos registros.

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Melzer (1931) proposed the genus *Cosmotomidius* to accommodate *Pogonocherus setosus* Audinet-Serville, 1834 and considered the new genus near to *Cosmotoma* Blanchard, 1845. Following this study, all authors interpreted this action to mean that Melzer had allocated the genus in the tribe Acanthocinini. *Cosmotomidius setosus*, the only species of the genus, occurs in Brazil from Espírito Santo to Santa Catarina, and also in Paraguay and Argentina.

In this contribution we revise *Cosmotomidius* and propose its transference to the tribe Acanthoderini, describe a new species from Bolivia, and provide new distribution records for *C. setosus*.

The following acronyms are used throughout: ACMT, American Coleoptera Collection, San Antonio, Texas, USA; MNKM, Museo de Historia Natural Noel Kempff Mercado, Santa Cruz, Bolivia; MNRJ, Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil; MZSP, Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil.

In view of the recent publication of a catalogue (Monné 2005), the references provided for each taxon are limited to the original description and the catalogue. It was not possible to determine the sex of the specimens without dissection.

## *Cosmotomidius* Melzer, 1931

*Cosmotomidius* Melzer, 1931: 74; Monné 2005: 35 (cat.).

Type species: *Pogonocherus setosus* Audinet-Serville, 1834 (original description).

Head, antennae, elytra and legs with very long, dense and erect hairs. Inferior ocular lobes rounded and about 3 times wider than the superior lobes. Antennae exceeding elytral

apices at apical third of segment 7; segment 3 slightly shorter than 4; segments 4-11 gradually shorter to the apex.

Prothorax about 1/3 broader than long, with lateral postmedian tubercles on each side. Pronotum with a pair of prominent median tubercles and one less-prominent postmedian tubercle; row of coarse punctures on the posterior and anterior margins. Prosternum with intercoxal process narrow, about 1/3 as wide as coxal cavity. Mesosternum with intercoxal process slightly narrower than coxal cavity. Anterior coxal cavities closed behind, and intermediate open to epimera. Elytra about 3 or 4 times as long as prothorax; with long white erect hairs and shorter black suberect setae; surface with few coarse punctures, denser on the basal third; a narrow longitudinal ridge follows the elytral suture from the scutellum to the apex; median crista near base; elytral apices sinuous, outer angle with a projecting spine. Humeri rounded and slightly prominent. Apical margin of scutellum rounded.

Hind legs slightly longer than fore legs. Femora clavate. Tibiae linear; protibial spurs short and subequal, meso- and metatibial spurs with the inner spur about 3 times longer than the outer. First segment of metatarsus as long as the following two segments combined. Fifth urosternite and urotergite rounded at apex.

Remarks. Melzer (1931) described the genus *Cosmotomidius* to accommodate *Pogonocherus setosus* Audinet-Serville, 1834, and considered it similar to *Cosmotoma* [*C. adjuncta* (Thomson, 1860) (Fig. 1)], except for the tuft on the antennae. Melzer (1931) did not formally propose the transfer of *P. setosus*, from the tribe Pogonocherini to Acanthocinini, but later authors such as Zikán & Zikán (1944) and Blackwelder (1946) included *Cosmotomidius* in Acanthocinini. We agree with Melzer (1931) that *P. setosus*

does not belong to the tribe Pogonocherini, because the mesocoxal cavities are laterally closed and the mesotibiae are obliquely excavated. However, we consider that it does not seem well placed in Acanthocinini because its antennal scape is short and conical, and in this tribe the scape is elongated and cylindrical. We propose the transfer of *Cosmotomidius* to Acanthoderini, which has this pattern of scape.

*Cosmotomidius* is similar to *Zikanita* Lane, 1943 in respect to the presence of abundant long hairs covering the body, pronotum with median tubercles, sides of prothorax with tubercles, and elytra with a median crista near the base. *Cosmotomidius* differs from *Zikanita* by the pronotum with a row of coarse punctures on the posterior and anterior margins, the mesosternal process not tubercled, and the elytra with black suberect setae. In *Zikanita* [*Z. perpulchra* Lane, 1943 (Fig. 6)] the pronotum has moderately coarse and sparse punctures, but they are organized in a row only on the posterior margin; the mesosternal process is tubercled; and the elytra lack black suberect setae.

### *Cosmotomidius setosus* (Audinet-Serville, 1834)

(Figs. 2, 5)

*Pogonocherus setosus* Audinet-Serville, 1834: 58.

*Exocentrus setosus*; White 1855: 396.

*Cosmotomidius setosus*; Melzer 1931: 74, fig. 12; Monné 2005: 35 (cat.).

**Redescription.** Integument brownish red. Ventral region with predominance of whitish pubescence. Head with dark-brown pubescence and on antennal tubercles, white. Antennae covered by brown pubescence except the bases of segments 3-11 with whitish pubescence; sparsely punctate.

Sides of prothorax with whitish pubescence. Pronotum with a pair of median tubercles towards back; surface with punctures moderately coarse and sparse, and pubescence brown to dark brown. Elytra about 3 times as long as prothorax; with irregular transverse bands of dark-brown, yellowish and whitish pubescence; apical third with a pair of spots or a transverse band of dark-brown to black pubescence.

Legs with whitish pubescence, except the tibiae, with intercalated transverse bands of whitish and dark-brown pubescence.

Measurements in mm. Total length, 5.3–7.4; prothorax length, 1.2–1.5; prothorax width, 1.9–2.5; elytral length, 3.5–4.8; humeral width, 1.9–2.8.

Plant host. *Achatocarpus praecox* (Achatocarpaceae) (Di Iorio 1994).

**Geographical distribution.** This species occurs in Brazil (Espírito Santo to Santa Catarina), Paraguay and Argentina. We have extended its distribution to Bahia, Mato Grosso, Goiás, and Minas Gerais in Brazil, and to Bolivia.

Specimens examined. BRAZIL, Bahia: Encruzilhada (Motel da Divisa, Rodovia Rio–Bahia Km 965, 960 m), 1 specimen, X.1974, Seabra & Roppa leg. (MNRJ); 1 specimen, XI.1972, Seabra & Roppa leg. (MNRJ); 6 specimens, XI.1974, Seabra & Roppa leg. (MNRJ);

Mato Grosso: 1 specimen (MZSP); Goiás: Jataí, 1 specimen, 1974, Martins leg. (MZSP); Minas Gerais: BR 55, km 100, 1 specimen, 21.XI.1960, Araujo & Martins leg. (MZSP); Águas Vermelhas; 1 specimen, XII.1983, M. Alvarenga leg. (MNRJ); Pedra Azul, 1 specimen, XI.1971, Seabra & F. M. Oliveira leg. (MNRJ); 4 specimens, XI.1972, Seabra & F. M. Oliveira leg. (MNRJ); Espírito Santo: Conceição da Barra, 1 specimen, XI.1972, B. Silva leg. (MNRJ); Linhares, 2 specimens, X.1972, B. Silva leg. (MNRJ); 2 specimens, X.1972, Roppa & M. Alvarenga leg. (MNRJ); 1 specimen, X.1959, D. Zajciw leg. (MNRJ); 4 specimens, XI.1967, F. M. Oliveira leg. (MNRJ); Rio de Janeiro: Rio de Janeiro (Corcovado), 1 specimen, XI.1964, M. Alvarenga & Seabra leg. (MNRJ); 1 specimen, X.1976, M. A. Monné leg. (MNRJ); Itatiaia, 1 specimen, 24.VII.1927, J. F. Zikán leg. (MZSP); 2 specimens, XII.1959, D. Zajciw leg. (MNRJ); 1 specimen, X.1963, E. Gouvêa leg. (MNRJ); 1 specimen, XI.1963, E. Gouvêa leg. (MNRJ); 2 specimens, XII.1963, E. Gouvêa leg. (MNRJ); São Paulo: Campinas, 1 specimen, XI.1919 (MZSP); Itu, 1 specimen, Fazenda Pau D'alto, 1 specimen, 14.XI.1960, Martins leg. (MZSP); Marília, 1 specimen, XI.1945, H. Zellibor leg. (MNRJ); 1 specimen, X.1948, H. Zellibor leg. (MNRJ). BOLIVIA, Santa Cruz: 1 specimen, (600 m), 28.IX.1960, Zischka leg. (MZSP). ARGENTINA, La Escondida: Chaco, 2 specimens, X.1936 (MNRJ).

### *Cosmotomidius vincus* new species

(Figs. 3, 4)

**Etymology.** The specific epithet refers to *vinci*, which is a Greek word meaning victory.

**Description.** Integument brown to black. Ventral region covered by shiny white pubescence. Head covered by whitish pubescence and on front, yellowish. Scape sparsely punctate. Scape and segment 2 with whitish pubescence. Segments 3–11 with brown pubescence not contrasting with the integument, except on the basal region with whitish pubescence.

Prothorax covered by yellowish-white pubescence. Pronotum with two median tubercles dorsally and, between these tubercles, two rows of longitudinal coarse punctures that reach the margins. Elytra about 4 times as long as prothorax; with pubescence ochre-colored except on the apex of median crista near base, yellowish; median inverted “Y” that initiates after scutellum and an ante-apical spot of whitish pubescence. Legs with whitish pubescence.

Measurements, in mm, holotype–paratype. Total length, 7.9–8.5; prothorax length, 1.3–1.4; prothorax width, 2.4–2.7; elytral length, 5.6–6.0; humeral width, 2.7–2.8.

Type material. Holotype, BOLIVIA, Santa Cruz: Buena Vista, XI.2001, M. C. Thomas & B. K. Dozier col. (MNKM). Paratypes, 2 specimens, same locality as holotype, XI.2001, B. K. Dozier col. (ACMT, MNRJ).

**Remarks.** *Cosmotomidius vincus* (Figs. 3, 4) differs from *C. setosus* (Figs. 2, 5) mainly by the coloration of the pubescence of the body, the direction of the median pronotal tubercles, and the punctuation of the pronotum. In *C. setosus* the pronotum has tubercles towards the back and punctures are sparse and moderately coarse. In *C. vincus* the tubercles are located more dorsally and between them are two longitudinal rows of coarse punctures that extend to the margins.



Figs. 1-6. 1, *Cosmotoma adjuncta* (Thomson), 6,2 mm; 2, *Cosmotomidius setosus* (Audinet-Serville), 7,4 mm; 3-4, *Cosmotomidius vincus* new species, holotype, 7,9 mm; 3, dorsal habitus, 4, closeup of prothorax; 5, *C. setosus*, closeup of prothorax; 6, *Zikanita perpulchra* Lane, closeup of prothorax.

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