

# Description of a new species of *Cnestus* SAMPSON, 1911, and notes on other species from South America (Coleoptera: Curculionidae: Scolytinae)

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## Abstract

A new species of *Cnestus* SAMPSON, 1911 (Coleoptera: Curculionidae: Scolytinae: Xyleborini) is described from Ecuador: *C. schoenmanni* sp.n. The male of *C. retifer* WOOD, 2007 is described for the first time. Data on the distribution of *C. laticeps* (WOOD, 1977) in Brazil and Peru, *C. peruanus* (WOOD, 1977) in Ecuador, as well as *C. retifer* and *C. retusus* (EICHHOFF, 1868) in Peru are added.

**Key words:** Coleoptera, Curculionidae, Scolytinae, Xyleborini, *Cnestus*, taxonomy, South America, Brazil, Ecuador, Peru.

## Introduction

The genus *Cnestus* was described by SAMPSON (1911) based on *C. magnus* SAMPSON, 1911 from Sri Lanka. This genus is distributed in the Oriental Region, Japan, Australia and North and South America (DOLE & COGNATO 2010, SMITH et al. 2017, WOOD 1986, 2007). *Cnestus* is related to *Xylosandrus* REITTER, 1913, but distinguished by the subcontiguous procoxae (SAMPSON 1911, HULCR et al. 2007). Females have four- or five-segmented antennal funicles; in *Cnestus*, the anterior margin of the pronotum bears four or fewer asperities, with a pair of coarse asperities medially, and the pronotum is often produced anteriorly (DOLE & COGNATO 2010). All females of the Neotropical species of *Cnestus* have five funicular segments (Fig. 3), the males have four. The new species described herein, *C. schoenmanni* sp.n. and *C. peruanus* (WOOD, 1977), have a round mycangium on the antero-lateral part of the pronotum (Fig. 1e).

It should, however, be noted, that several Xyleborini genera need phylogenetic revision based on a thorough cladistic analyses.

All species of *Cnestus* are xylomycetophagous. They often attack broken branches of the host trees (diameter 14–110 mm).

## Material and methods

All specimens listed below were collected by A. Tishechkin in Orellana Province of Ecuador in 2008, and by A. V. Petrov in Junín, Loreto and Pasco regions of Peru in 2006–2018, and in Brazil, Mato Grosso do Sul, in 2010.

APP Alexander V. Petrov private collection, Moscow, Russia

ZMM Zoological Museum of Moscow State University, Moscow, Russia

The photographs were made with a Canon 50D camera body and a MP-E 65 mm macro lens.

## *Cnestus schoenmanni* sp.n.

TYPE LOCALITY: Orellana, Ecuador.

TYPE MATERIAL: **Holotype** ♀ (ZMM): ECUADOR: Orellana, Yasuní N.P., Yasuní Research Stn., 230 m a.s.l., 0°40.4'S 76°23.9'W, flight intercept trap, 11.–24.VIII.2008, leg. A.K. Tishechkin.

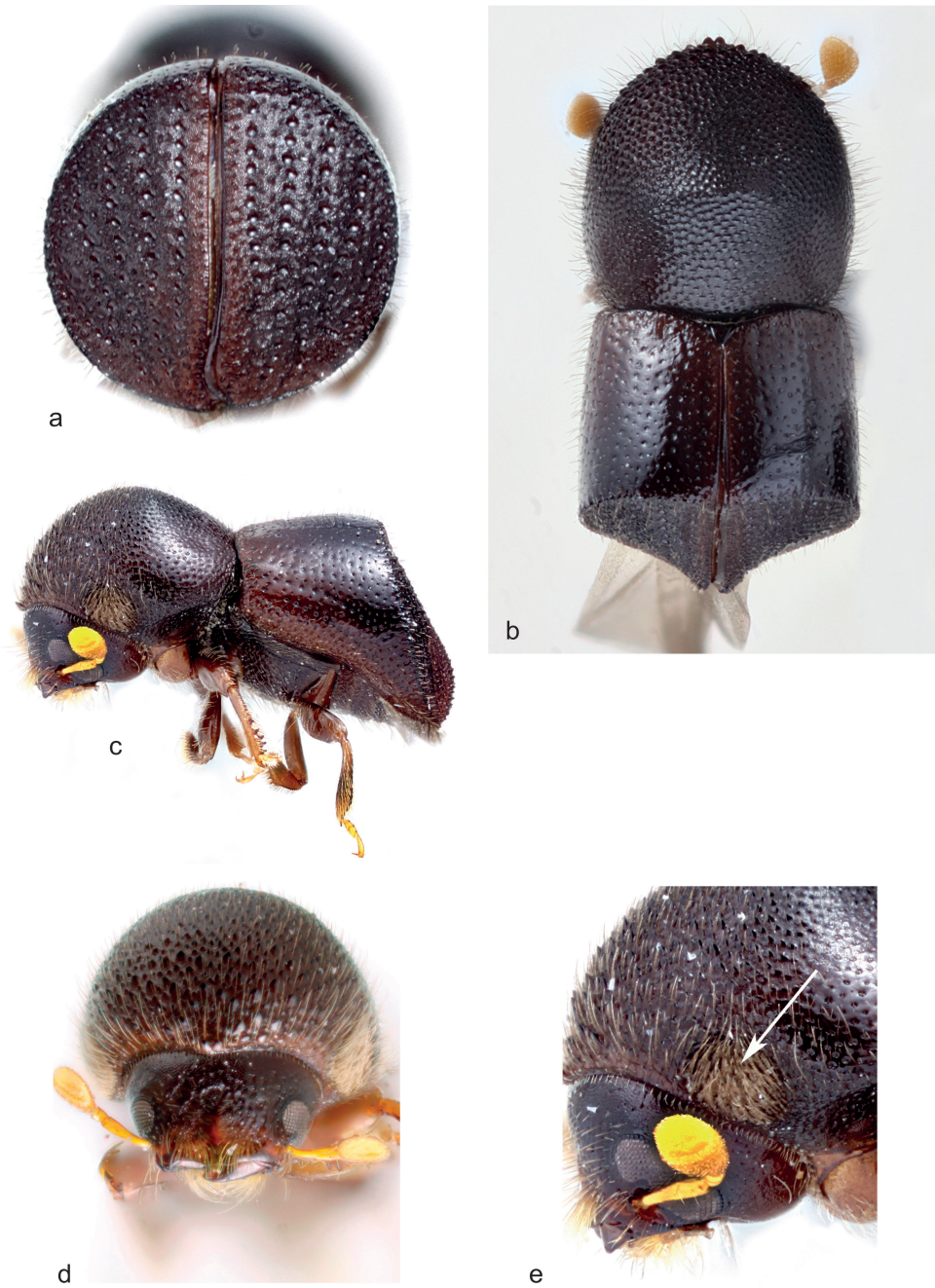


Fig. 1: *Cnestus schoenmanni*, female: a) caudal view, b) dorsal view, c) lateral view, d) frontal view, e) mycangium on antero-lateral area of pronotum.

DESCRIPTION (female): 2.4 mm long, 2.0 times as long as wide. Body dark brown (Fig. 1).

Head weakly shining, dark brown to black, epistoma and gula reddish brown. Frons flat in lower part, convex from upper level of eyes to vertex, with longitudinal median line below upper level of eyes, from epistoma to center of frons, median line wide, smooth and shining; surface of frons reticulate, punctures numerous, large, deep, rounded (Fig. 1d). Gula glabrous, with fine punctures. Vestiture of pale erect setae on central part of frons, abundant and longer in epistomal area, sparse fine very short yellow seta on upper level of eyes. Eyes shallowly emarginated, oval. Antennae pale brown, scape long, length of scape as long as funicle and club together; funicle five-segmented; club as long as wide, rounded, with corneous area occupying basal third of club, covered by pale yellow setae.

Pronotum dark brown, weakly shining, 1.1 times as long as wide. Rounded from base to anterior part, lateral margins weakly arcuate on basal two thirds of pronotal length, widest near middle of pronotum, apical margin rounded with three pairs of serrations (one large pair in centre and two lateral smaller pairs); summit in middle of pronotum length, anterior slope steep; surface with asperities from anterior part to base of pronotum, asperities coarse on anterior area, becoming much smaller and more numerous toward summit, central area of basal part of pronotum occupied by very small asperities; basal part of pronotum reticulate, in central area sparse punctures small, but on lateral areas punctures larger and more numerous. Vestiture of short adjacent setae on disc and long erect brown setae on anterior and lateral margins of pronotum. Antero-lateral part of pronotum with round mycangium covered by numerous pale adjacent setae (Fig. 1e). Scutellum triangular, dark brown.

Elytra brown at base to dark brown in posterior part, shining; as long as wide, 1.04 times as long as pronotum; disc occupying 68 percent of elytral length; surface of disc glabrous with rows of round dense punctures, area between punctures glabrous, stria 1 shorter than stria 8, with 11 punctures, stria 8 with 19 punctures; interstriae flat, not elevated, 2.5 times as wide as striae, with row of very small punctures. Declivity subtruncate, circumdeclivital ring abrupt, with costa along borders, strongly elevated crest becoming subserrate on lower half of declivity. Surface reticulate, striae straight, punctures large, round, shining, punctures on declivity larger than punctures on disc; interstriae with irregular row of punctures (Fig. 1a). Area between punctures on striae and interstriae marked by many criss-crossing lines.

Metaventrite and metepisternum brown with brown erect setae. Abdomen brown, ventrites 1–5 with numerous small punctures, vestiture of long erect dark brown setae, longer setae on apical margin of fifth ventrite. Legs brown, outer apical margin of protibia armed by five teeth of about equal size, apex of protibia with one curved tooth; femur and tibia covered by numerous short yellowish brown setae.

DISTRIBUTION: Known only from the type locality.

DIAGNOSIS: The new species is closely related to *Cnestus retifer* (WOOD, 2007), but can be distinguished by the asperities on the basal part of the pronotum, by the mycangium on the antero-lateral part of the pronotum, by specific punctures of striae and interstriae on elytral disc and declivity, and by the strongly elevated crest becoming subserrate on the lower half of the declivity.

ETYMOLOGY: The new species is named in honor of the late Dr. Heinrich Schönmann (NMW), our friend and colleague.

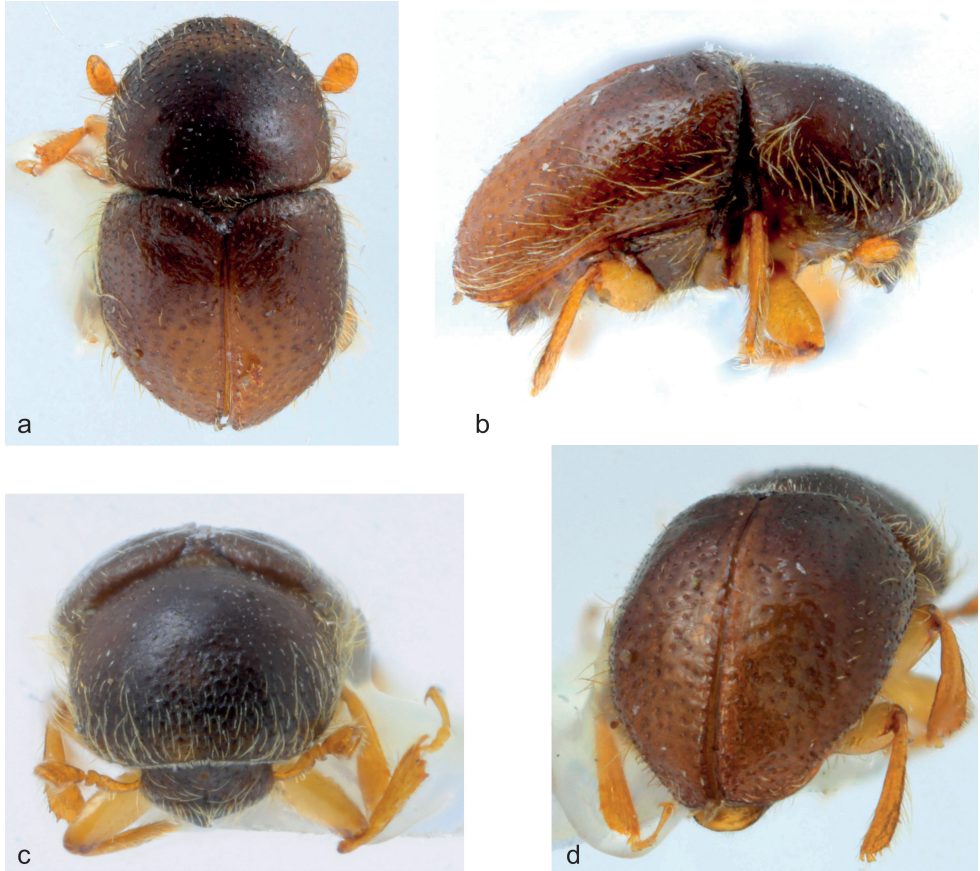


Fig. 2: *Cnestus retifer*, male: a) dorsal view, b) lateral view, c) frontal view, d) caudal view.

***Cnestus laticeps* (WOOD, 1977)**

**MATERIAL EXAMINED:**

B R A Z I L: MATO GROSSO DO SUL: Selviria, Universidade Estadual Paulista (UNESP) Farm, riparian forest fragment, ca. 360 m a.s.l., 20°19.8'S 51°24.6'W, ex *Mabea fistulifera* MART. (Euphorbiaceae), 25.I.–11.II.2010, leg. A.V. Petrov (7 ♀♀ in APP).

P E R U: LORETO: 74 km SSW Iquitos, 125 m a.s.l., 4°20.2'S 73°30.9'W, window trap, 29.II.–8.III.2008, leg. A.V. Petrov (2 ♀♀ in APP).

***Cnestus peruanus* (WOOD, 2007)**

**MATERIAL EXAMINED:**

E C U A D O R: ORELLANA: Tiputini Biodiversity Station, 230 m a.s.l., 0°63.7'S 76°8.9'W, 29.VII.–3.VIII.2008, leg. A.K. Tishechkin (2 ♀♀ in APP).

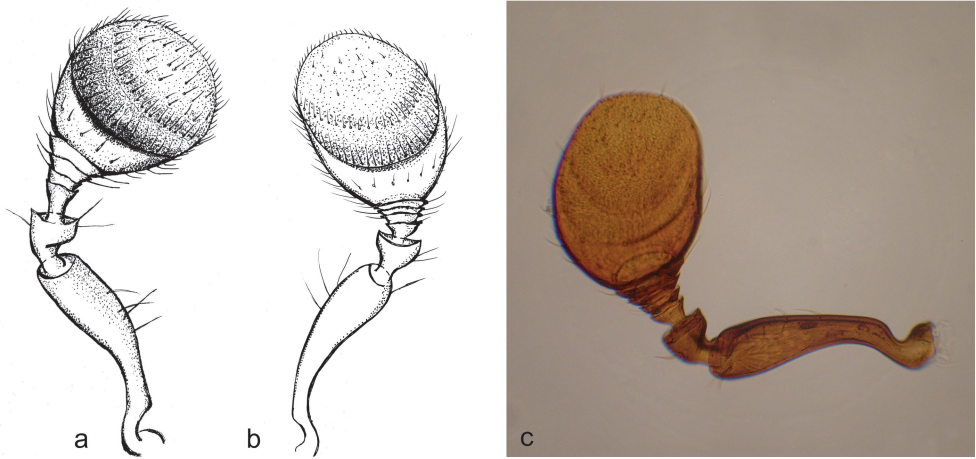


Fig. 3: Antennae of females of Neotropical *Cnestus*: a) *C. peruanus*, b) *C. retifer*, c) *C. retusus*.

***Cnestus retifer* (WOOD, 2007)**

**MATERIAL EXAMINED:**

P E R U: JUNÍN: Perené River, 8 km ENE Puerto Ocopa, near Canan Eden Village, 1060 m a.s.l., 11°04.4'S 74°15.3'W, window trap, 2.–7.II.2008, leg. A.V. Petrov (37 ♀♀ in APP); 15 km NW Satipo, Capiro River, near Rio Venado Village, 1100 m a.s.l., 11°11.8'S 74°46.2'W, in branch of *Protium* sp. (Burseraceae) and window trap, 10.–20.II.2013, 16.–24.III.2013, leg. A.V. Petrov (2 ♂♂, 47 ♀♀ in APP); LORETO: 62 km SW Iquitos, Itaya River, 123 m a.s.l., 04°15.5'S 73°28.0'W, window trap, 3.II.2006, and 120 m a.s.l., 04°15.7'S 73°28.0'W, 8.V.2009, leg. A.V. Petrov (6 ♀♀ in APP); ca. 70 km SSW Iquitos, 125 m a.s.l., 04°20.2'S 73°30.9'W, window trap, 29.II.–8.III.2008, leg. A.V. Petrov (15 ♀♀ in APP); PASCO: 13 km NE Pozuzo, near Santa Roza Village, 1530 m a.s.l., 75°27.4' W 10°0.1'S, window trap, 11.X.2018, leg. A.V. Petrov (3 ♀♀ in APP).

**DESCRIPTION (male):** Dwarfed form, length 2.0–2.2 mm, 1.8 times as long as wide. Body brown, dull (Fig. 2).

Head brown. Frons flat with fine median line from epistoma to center, surface reticulate, punctures deep and sparse (Fig. 2c). Vestiture of sparse long pale setae, longer on lateral part of frons. Antenna yellowish brown, funicle four-segmented, club elliptic, 1.3 times as long as wide, corneous area occupying basal two thirds of club.

Pronotum dark brown, dull, 0.85 times as long as wide, lateral margins weakly arcuate on basal two thirds of pronotum, widest near base part of pronotum, anterior margin shallowly emarginated in center, without serrations; anterior slope weakly convex, asperities rather coarse, becoming smaller and sparse toward central part of pronotum; basal part reticulate, punctures minute. Vestiture of pale setae longer in lateral areas of pronotum, in central part of disc very short. Scutellum dull brown, very wide, 0.4 times as long as wide.

Elytra brown in basal part and yellowish brown on declivity, 0.97 times as long as wide, 1.3 times as long as pronotum; disc occupying 40 percent of elytral length, subrugose, punctures of striae and interstriae equal in size, area between punctures marked by deeply impressed crossing lines. Declivity flat, striae 1–3 arcuate from base of declivity to apex; interstria 1 (sutural) with a row of small tubercles (Fig. 2d).

Metaventricle and metepisternum brown, with pale adjacent setae. Abdomen yellowish brown, ventrites 1–5 with small punctures, vestiture of short pale setae. Pygidium ornamented by very

long pale setae. Legs yellow, outer apical margin of protibia armed with two teeth, apex of protibia with one procurved tooth; vestiture of pale numerous long setae on outer apical margin of protibia.

***Cnestus retusus* (EICHHOFF, 1868)**

**MATERIAL EXAMINED:**

P E R U: JUNÍN: Satipo Province, Ene River, 5 km NNE Pichiquia Village, 520 m a.s.l., 11°23.3'S 74°06.4'W, window trap, 25.–26.IX.2017, leg. A.V. Petrov (7 ♀♀ in APP); Perené River, near Canan Eden Village, 8 km NNE Puerto Ocopa; LORETO: ca. 70 km SSW Iquitos, 125 m a.s.l., 04°20.2'S 73°30.9'W, 29.II.–8.III.2008, window trap, leg. A.V. Petrov (4 ♀♀ in APP).

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