

A new species of the genus *Ceratolepis* Chapuis, 1869 (Coleoptera: Curculionidae: Scolytinae) from Peru

Новый вид рода *Ceratolepis* Chapuis, 1869 (Coleoptera: Curculionidae: Scolytinae) из Перу

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КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Curculionidae, Scolytinae, Scolytini, *Ceratolepis*, новый вид, короеды, Перу.

ABSTRACT. A new species of bark beetles, *Ceratolepis yakushkini* Petrov, **sp.n.** is described and figured. The species, breeding on *Virola* sp. in the rain forest of Satipo province (Junin region) of Peru.

РЕЗЮМЕ. Описан новый вид короедов *Ceratolepis yakushkini* Petrov, **sp.n.** из провинции Сати́по (региона Ху́нин) Республики Перу. Новый вид, развивается на *Virola* sp. в дождевых тропических лесах.

The curculionid subfamily Scolytinae comprises more than 6500 species [Wood, Bright 1992; Bright, Skidmore, 2002, Alonso-Zarazaga, Lyal, 2009; Jonson *et al.*, 2026], varying in size, shape of the body, behavior, and trophic specialization. The tribe Scolytini Latreille, 1804 consists of six genera (*Camptocerus* Dejean, 1821, *Ceratolepis* Chapuis, 1869, *Cnemonyx* Eichhoff, 1868, *Loganius* Chapuis, 1869, *Scolytopsis* Blandford, 1896, *Scolytus* Geoffroy, 1762) and approximately 217 species [Smith, Cognato, 2010, 2013; Petrov, 2017, 2020; Jonson *et al.*, 2026]. Twenty-eight species of Scolytini have been described in the last fifteen years from the Neotropical and Oriental Regions [Mandelshtam, Petrov, 2010; Petrov, Mandelshtam, 2010; Smith, Cognato, 2010, 2013, 2017; Petrov, 2017, 2020].

The genera *Ceratolepis*, *Camptocerus*, *Cnemonyx* and *Loganius* are distinguished from *Scolytopsis* and *Scolytus* by the scutellar shield flush with elytral bases without deep scutellar groove [Wood, 2007] and entire basal margin of propygidium, not emarginated. *Ceratolepis* is closely related to *Cnemonyx*, *Camptocerus*, and *Loganius* and is distinguished by: 1) asymmetry of antennal club, a covering of short palmate setae, and a partial septum on suture 1; 2) the lack of supplemental

denticles on the apical margin of the meso- and meta-thoracic tibiae; 3) the strongly bilobed tarsal segment 3; 4) the lack of a carina on the base of the tenth interstria [Smith, Cognato, 2013]. Distribution of *Ceratolepis* is restricted by the Neotropical region.

Material and methods

The entomological material used in the preparation of the publication was collected during expeditions to the Republic of Peru with the participation of A.V. Petrov in 2015, 2017 and 2024. The research was carried out in Satipo Province, Junin Region. The type series of beetles is kept in MSUC, EMUA, ZIN ZMMU. All specimens cited here are deposited in the collections listed below and some private collections mentioned in text.

APP — A.V. Petrov's private collection (Moscow, Russia); DKP — D.I. Kuleshov's private collection (Tomsk, Russia); EMUA — Entomological Museum, Universidad Nacional Agraria La Molina Lima, Perú; MSUC — Michigan State University A.J. Cook Arthropod Research Collection, East Lansing, MI, USA; QEA — E.A. Yakushkin's private collection (Moscow, Russia); ZIN — Zoological Institute, St. Petersburg, Russia; ZMMU — Zoological Museum of M.V. Lomonosov Moscow State University, Russia.

The photographs of the beetles were taken with a Canon 50D camera and an MP-e65 lens. Digital processing of the photographs was performed using the Picolay program. Photographs of male genitalia and proventriculus were taken with a Zeiss Axio Scope A1 microscope.

Results

The fauna of Peru includes four *Ceratolepis* species: *Ceratolepis amazonica* (Eggers, 1929), *C. boliviae* (Blackman, 1943), *C. insignis* (Wood, 1969) and the

new species described below. *C. boliviae* is recorded for the first time in Peru. Thus, we supplemented the list of Scolytinae of Peru [Smith *et al.*, 2017] with two species.

***Ceratolepis yakushkini* Petrov sp.n.**

Figs 1–9.

Type material. HOLOTYPE: ♂, PERU: Junin region, 15 km SSW Satipo, near Rio Venado village, h~1243 m asl, 11°11'39.4''S 74°46'08.6''W, ex. *Virola sebifera*, 14.x.2024. leg. A.V. Petrov [ZMMU].

Paratypes: same locality as holotype, but 14–18.x.2024, ex. *Virola sebifera*, A.V. Petrov (2 ♂♂ 2 ♀♀ in EMUA; 1 ♂ 1 ♀ in MSUC; 1 ♂ 1 ♀ in ZIN; 39 paratypes in APP, and 1 ♂ 1 ♀ QEA); same locality, 18.x.2024, 2 ♀♀ D.I. Kuleshov (2 ♀♀ in DKP); same locality, but 11°11'39.4'' N 74°46'08.6''W, wind. traps, 20–24.02.2024, A.V. Petrov. (4 ♂♂ 6 ♀♀ in APP); left shore of Perene river, 3 km NNE Canan Eden village, 11°04'22'' S 74°15'53''W, h~ 1050 m, 4.II.2008 (1 ♂ 2 ♀♀ in APP).

DIAGNOSIS. The male and female are distinguished from all other *Ceratolepis* by: opaque body surface; clearly striolate pronotal surface between punctures; serrations on postero-lateral margin of elytra; elytral surface without hairs.

DESCRIPTION. Male (Figs 1–2). Length 2.9–3.9 mm, 2.17–2.37× as long as wide. Black or dark brown, tarsus reddish-brown.

Head: black, dull. Median half of epistoma with weakly elevated procurved carina. Median half of epistomal margin with a pair short brush of pale setae. Frons flat, in lower half weakly concave from epistoma to distinctly below upper level of eyes (Fig. 6). Surface dull, coarsely evenly punctured by deep round points, which on concave area are densely spaced. Surface of upper part of frons above level of eyes and vertex punctured very small superficial points, surface of vertex alutaceous. Concave area covered by short abundant erect setae, vestiture of sparse recumbent pale setae on lateral parts of frons (Figs 2, 4). Gena finely punctate, gula strigate. Eyes entire, widely oval, 0.2× as long as wide. Antennal scape black, flattened, 2.1× as long as funicle with pedicel, dorsal scape's surface with elongate sparse pale setae; antennal funicle (including pedicel) 7-segmented, funicle segments with sparse elongate pale setae, length of setae slightly greater than segment width; antennal club flattened, strongly asymmetrical, covered in short palmate pale setae, with short partial septum that is not marked externally by rows of setae.

Pronotum black, dull; 0.90–0.95× as long as wide. Pronotal base straight, bisinuate, lateral margins marked by fine, raised line. Surface of pronotal disc punctated, median line impunctate; a middle of pronotal disc fine superficial punctured, spaces between the punctures clearly largest than diameter of a puncture; punctures larger, coarser toward margins, than in central part of disc and spaces between the punctures smaller than diameter of a puncture. Surface of pronotal disc clearly striolate (aciculate) (Fig. 4). Discal vestiture missing.

Scutellum wide 0.33× as long as wide, smooth, flush with level of elytra. Elytra without scutellar notch.

Elytra: dark brown, dull; 1.08–1.14 × as long as wide, 1.17–1.21 × as long as pronotum. Elytral base straight, lateral margins slightly bent towards middle of elytra and broadly rounded in posterior third, with coarse crenulation in apical part (Fig. 5). Declivity occupying posterior third of elytral length. Elytral disk with straight striae. Striae on the disk shallowly impressed, rounded punctures superficial, but distinct; spaces between the punctures equal point's diameter; spaces between the punctures rugose reticulate. Interstriae on the disk

convex, about twice as wide as striae, surface punctured by small points, confused in base of elytra, but with uniseriate row of very small punctures at summit on each from middle of elytral disc to apex; surface of interstriae rugose reticulate, without tubercles. Declivity broadly convex, interstriae on declivity slightly narrowed, with uniseriate row of very small punctures at summit on each; striae reticulate. The whole elytral surface without hairs.

Abdomen: dark brown. Ventrites 1, 2 wider than ventrites 3–5, surface of ventrites evenly punctured and covered by short hair-like and caudally directed pale setae.

Legs: coxae, femur and tibiae are dark brown, tarsus is reddish-brown. Procoxae narrowly separated by approximately one-fourth of coxal width. Pro-, meso- and metathoracic tibiae covered by short hairs.

Proventriculus (Fig. 8) typical for *Ceratolepis*. The inner lining consists of eight sclerotized sections arranged in circle forming a tube. Each section 2.2× as long as wide; posterior (masticatory) plate 1.6× as long as apical plate. Anterior plate divided by median longitudinal suture into two halves. Anterior side of apical plate weakly procurved. Apical plate armed by adjacent flat teeth, and by sclerotized transverse suture, which arcuate curved from lateral side of apical plate towards middle longitudinal suture. Posterior plate with apical laminate teeth and masticatory teeth (32–34 masticatory teeth).

Male aedeagus (Figs 9–10) typical for *Ceratolepis*; elongate, 3.9× as long as wide; apodemes 0.57× as long as median lobe; apodemes widely separated at base and almost closed anteriorly. Median lobe flat, lateral and apical margins with moderate sclerotization; lateral folds subparallel, uniformly arcuate, but apical third of the body length clearly widen. Internal sac central area membranous, seminal valve sclerotized, forming a transverse horseshoe shape that follows the contours of the apical margin the median lobe. Tegmen semi-circular, ventral side elongated proximally. Spicule almost as long as aedeagus, sickle-shaped, with large straight hook near distal end.

Female (Figs 3, 5): 2.9–3.9 mm, 2.17–2.30× as long as wide; similar to male, but distinguished more convex upper part of frons above level of eyes; lower half of frons weakly concave from epistoma to distinctly below upper level of eyes, surface covered by single very short pale hairs.

GEOGRAPHICAL DISTRIBUTION: Central Rainforest of Peru — “bosque basimontano de Yunga” [Mapa Nacional de Ecosistemas del Peru, 2018], in the territory of Satipo province (Junin Region) of Peru.

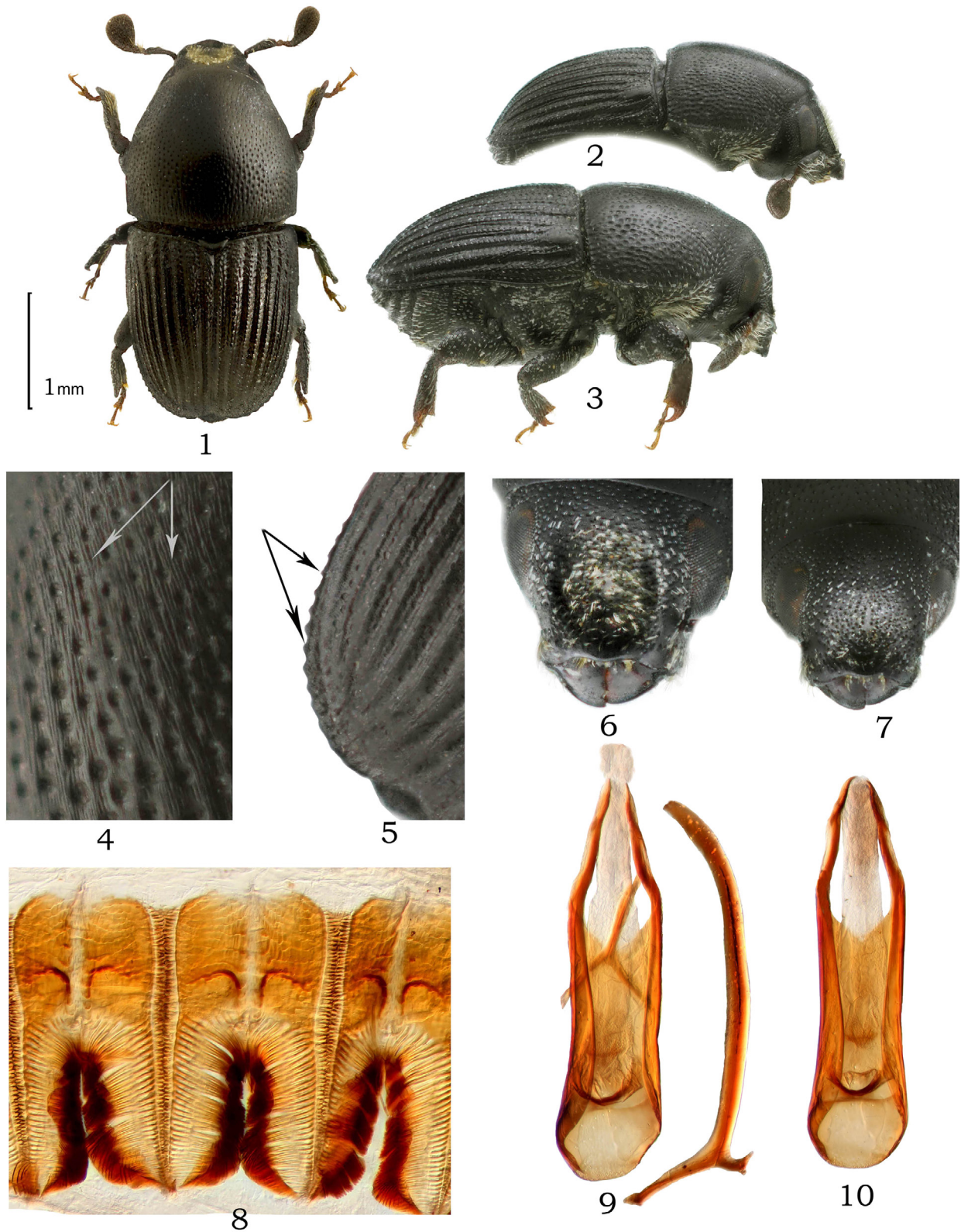
BIOLOGY: Host tree is *Virola* ssp. in the rain forest. Adults are monogamous. Egg galleries are constructed between the bark and the wood of trunks of recently felled or dying trees. The egg gallery is biramous and transverse. Eggs are laid singly in niches on both sides of the gallery.

ETYMOLOGY: The new species is dedicated to Evgeniy A. Yakushkin, who devoted his life to the investigation of dendrophilous insects of Russia. Our colleague will turn 70 in July 2026.

Compliance with ethical standards

Ethical approval: No ethical issues were raised during our research.

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Figs 1–9. *Ceratolepis yakushkini* Petrov, sp.n.: 1–3 — habitus; 4 — surface of pronotal disc; 5 — crenulation on apical margin of elytra; 6–7 — head; 8 — proventriculus; 9–10 — genitalia; 1 — dorsal view; 2–3 — lateral view; 1, 4 — holotype, male; 2, 6–10 — male paratypes; 3, 5 — female paratypes.

Рис. 1–9. *Ceratolepis yakushkini* Petrov, sp.n.: 1–3 — внешний вид; 4 — поверхность диска переднеспинки; 5 — зазубренность на вершинном крае надкрылий; 6–7 — голова; 8 — провентрикулус; 9–10 — гениталии; 1 — вид сверху; 2–3 — вид сбоку; 1, 4 — голотип, самец; 2, 6–10 — паратипы, самцы; 3, 5 — паратипы, самки

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