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Five new species of the genus *Pityophthorus* EICHHOFF, 1864 from Peru (Coleoptera: Curculionidae: Scolytinae)

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Abstract

Five new species of *Pityophthorus* EICHHOFF, 1864 (Coleoptera: Curculionidae: Scolytinae: Corthylini: Pityophthorina) are described from Peru: *P. donbrighti*, *P. invisibilis*, *P. maslovi, P. tishechkini* and *P. vilcabambensis*.

Key words: Coleoptera, Curculionidae, Scolytinae, Corthylini, Pityophthorina, *Pityophthorus*, taxonomy, *Oreopanax*, *Flourensia*, Peru.

Introduction

EICHHOFF (1864) did not designate a type species when describing the genus *Pityophthorus*. Subsequently HOPKINS (1991) designated *Bostrichus lichtensteinii* (RATZEBURG, 1837) as type species of this genus.

For many years the generic concept for *Pityophthorus* has varied widely between different authors. There are still questions about the synonymy of the genus *Gnatholeptus* BLACKMAN, 1928 (BRIGHT 1981, WOOD 2007). It would also be useful to determine the relationships between *Pityophthorus* and *Araptus* EICHHOFF, 1872. According to WOOD (2007), the latter can be distinguished from *Pityophthorus* by the absence of two partially or completely septate sutures in the antennal club.

One hundred years ago the first world check list of *Pityophthorus* included 64 species (HAGEDORN 1910). Now the genus contains over 368 species, living mostly in the Neotropical, Nearctic, Palearctic, and Paleotropic Regions (ALONSO-ZARAZAGA & LYAL 2009, SMITH & HULCR 2015, WOOD & BRIGHT 1992). Most *Pityophthorus* species are hosts of conifers, woody shrubs, vines and herbaceous plants (BRIGHT 1981, SMITH & HULCR 2015, WOOD & BRIGHT 1992).

A total of five new species of *Pityophthorus* was collected by the author in Peru 2009–2014. These species are described herein.

Material

All specimens listed below were collected by A.V. Petrov. Type material is deposited in APP, MEFEIS, MSUC, LSAM, NHMW and ZMM. All specimens cited here are deposited in the collections listed below and some private collections mentioned in the text.

APP	Alexander Petrov private collection, Moscow, Russia
LSAM	Louisiana State Arthropod Museum, Louisiana Museum of Natural History, Baton Rouge, USA
MEFEIS	Museu de Entomologia da FEIS/UNESP, Ilha Solteira, São Paulo State, Brazil
MSUC	Albert J. Cook Arthropod Research Collection, Michigan State University, East Lansing, USA
NMW	Naturhistorisches Museum Wien, Vienna, Austria
TAMU	Entomology Collection, Texas A&M University, College Station, Texas, USA
ZMM	Zoological Museum of Moscow State University, Moscow, Russia

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Images were made with a Cannon 50D camera body and a MP-e65 mm macro lens. Photographs of *Pityophthorus invisibilis* were made with a Zeiss AxioSope.A1 microscope and a Canon EOS 6D camera, using stacking software.

***Pityophthorus donbrighti* sp.n.**

TYPE LOCALITY: Satipo Region, Cordillera Oriental, Junín Department, Peru.

TYPE MATERIAL: **Holotype** ♂ (ZMM): P E R U: JUNÍN: Cordillera Oriental, 4 km S of Calabaza, 3103 m a.s.l., 74°48'43.8"W 11°32'38.8"S, 20.V.2014, ex *Oreopanax* sp., leg. A.V. Petrov. **Paratypes**: 29 ♂♂ and 47 ♀♀ same place and date, ex *Oreopanax* sp., leg. A.V. Petrov (4 paratypes in TAMU, 72 paratypes in APP).

DESCRIPTION (Male): 2.0 mm long, 2.6 times as long as wide (Fig. 1a–d). Body dark brown to black, elytra reddish-brown, shining. Head black, frons convex, except for a feeble transverse impression on the lateral parts of the epistoma, and a flat shining area in the central part of the epistoma; central portion of frons with a wide longitudinal median carina from center to vertex; surface of frons weakly shining, shagreened, coarsely and evenly punctured by sparse large deep punctures, vestiture mostly confined to lower half and lateral parts of frons (Fig. 1c). Eyes large, coarsely faceted. Antennae with dark brown club, light brown scape and funicle; club oval with brown long setae, sutures straight, sclerotized on lateral and mesal edges, the first segment narrower than the second and third, the second segment widest.

Pronotum black, shining, 1.0 times as long as wide, widest at base, shape of pronotum almost triangular in profile; base of pronotum nearly straight, sides arcuately converging to rounded anterior margin; anterior margin armed by 10 basally separate serrations, summit slightly anterior to middle; asperities coarse, partly grouped into subconcentric rows. Base and posterior half of pronotum punctured by rounded large deep punctures, spaces between deep punctures with minute punctures; vestiture of sparse, short yellow setae in basal area and more abundant, long setae in antero-lateral and lateral parts of pronotum. Scutellum large, dark brown, dull, rounded.

Elytra reddish brown, weakly shining, 1.57 times as long as wide, 1.7 times as long as pronotum. Sides subparallel and tapering toward apex on posterior 3/4 of length, apex moderately arcuate to narrowly rounded. Discal striae weakly impressed, to the base of the declivity with large punctures (diameter 0.02–0.025 mm). Interstriae smooth, weakly shining, about 1.6–1.8 times as wide as striae, punctures in interstriae with sparse yellow short setae on disc, becoming longer and more abundant posteriorly. Elytral declivity occupying 1/5 of elytral length, surface shining, flat, strial rows in declivity straight with large punctures, sutural interstriae weakly elevated, interstria 3 unarmed (Fig. 1d).

Mesonotum covered by large sparse rounded punctures with sparse setae, abdomen with small abundant punctures and long setae. Legs unicoloured, reddish brown, with short yellow setae.

Female: 2.0–2.45 mm, 2.5–2.60 times as long as wide, similar to male except frons more convex, without epistomal impression, and short, poorly developed carina in upper part of frons. Vestiture of frons similar to that of male (Fig. 1e).

NOTE: Paratypes (males and females) length 1.95–2.45 mm, 2.5–2.62 times as long as wide, elytra 1.5–1.6 times as long as wide, 1.6–1.7 times as long as pronotum.

DIAGNOSIS: The new species is closely related to *Pityophthorus longipilis* SCHEDL, 1951, but can be distinguished by the specific structure of the elytral declivity and the absence of tubercles on interstria 1.

DISTRIBUTION: Known only from the type locality.

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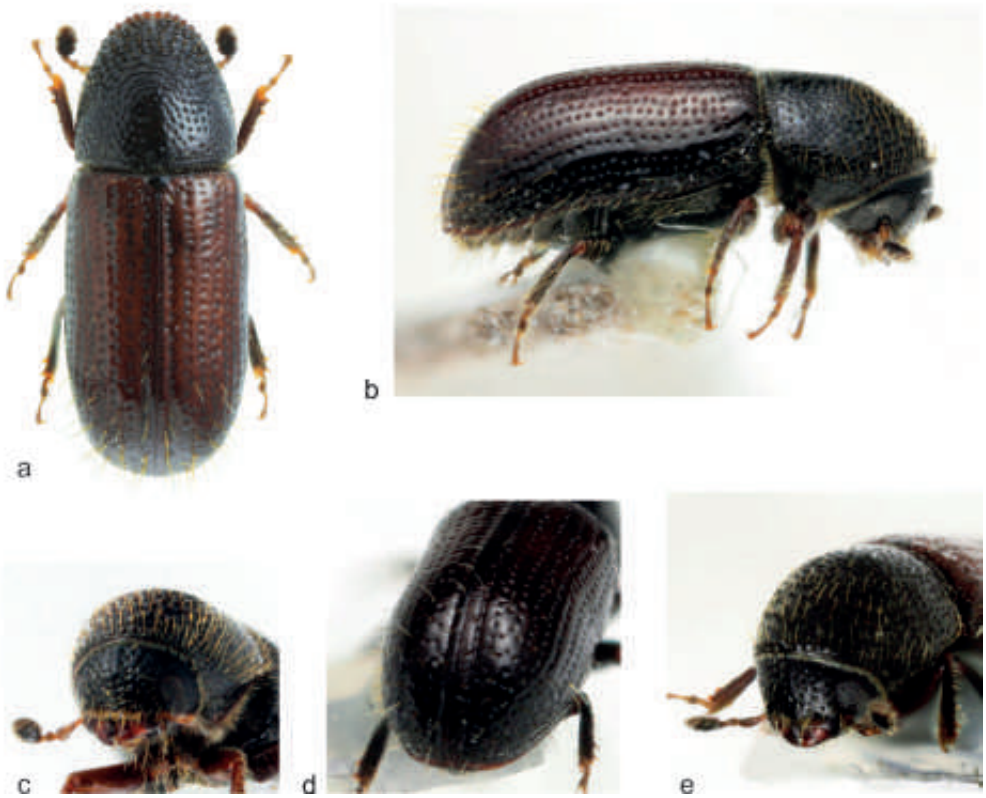

Fig. 1: *Pityophthorus donbrighti,* a) dorsal view, b) lateral view, c) frons of male, d) caudal view, e) frons of female.

Fig. 2: *Pityophthorus invisibilis*, a) dorsal view, b) lateral view, c) frons of male.

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HOST: Found on leaf stalks of *Oreopanax* sp. (Araliaceae).

ETYMOLOGY: The new species named in honor of the eminent entomologist Dr. Donald E. Bright who dedicated his life to the study of Scolytidae and Platypodidae.

***Pityophthorus invisibilis* sp.n.**

TYPE LOCALITY: Capiro river, Satipo Region, Junín Department, Peru.

TYPE MATERIAL: **Holotype** ♂ (ZMM): P E R U: JUNÍN: Cordillera Oriental, 16 km NW of Satipo, 1050 m a.s.l., 74°46'15.0"W 11°11'58.2"S, 3.III.2010, window trap, leg. A.V. Petrov.

DESCRIPTION (Male): Length 0.85 mm long, 2.83 times as long as wide (Fig. 2a–c). Body dark brown, shining.

Head dark brown, mandibles and antennae reddish brown. Frons weakly convex, almost flat, central part of front glabrous and shining, above central level to vertex punctured by sparse small punctures, lower part of frons sparsely punctured by large shallow punctures with short light pubescence, more abundant and long on epistoma (Fig. 2c); eyes large, coarsely faceted; antennal scape wide, elongate, funicle 5-segmented, all segments similar in width, almost squared, club subcircular, the second segments widest, first and second segments equal in size, surface of club without vestiture.

Pronotum cylindrical, dark brown, shining, vestiture of sparse setae on anterior portion; 1.13 times as long as wide, with parallel sides in the basal half and evenly rounded towards the anterior margin, anterior margin with six separate serrations, summit at middle of pronotum, anterior slope with five transverse, concentric rows of coarse asperities, posterior areas shining with sparse small punctures. Vestiture of sparse short white setae in discal area, longer and more abundant in anterior part of pronotum. Scutellum large, flat, glabrous, shining, triangular.

Elytra glabrous, shining, 1.76 times as long as wide, 1.6 times as long as pronotum; disc occupying almost 3/4 of elytral length, lateral sides subparallel, evenly rounded toward the elytral declivity; striae not impressed, sparse punctures in rows with small setae in each, interstriae as wide as striae, smooth and shining, mostly impunctate; declivity convex, steep, broadly shallowly bisulcate, glabrous, shining, striae 1 and 2 with very small punctures, interstria 3 higher than interstriae 1 and 2, crest narrowly rounded, without minute tubercles; vestiture confined to declivity on odd-numbered interstriae, setae moderately long, sparse (Fig. 2d).

Metepisterna and abdominal sternites with long yellow setae. Legs reddish brown with short light setae.

DIAGNOSIS: The new species is closely related to *Pityophthorus pygmaeolus* SCHEDL, 1970, from which it can be distinguished by two small tubercles on the anterior margin of the pronotum and the transverse rows of asperities on the anterior slope of the pronotum. *Pityophthorus invisibilis* has almost straight transverse rows, which are subconcentric in *P. pygmaeolus.*

DISTRIBUTION: Known only from the type locality.

ETYMOLOGY: The species name relates to the very short body length. “Invisibilis” (Latin) means invisible, diminutive, unprecedented size.

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***Pityophthorus maslovi* sp.n.**

TYPE LOCALITY: Vilcabamba Mts., Cusco Department, Peru.

TYPE MATERIAL: **Holotype** ♂ (ZMM): P E R U: CUSCO: Cordillera Vilcabamba, 34 km NW from Cusco, Watá, 3640 m a.s.l., 72°14'40.0"W 13°21'.53.8"S, 19.IV.2009, ex. *Flourensia polyflores*, leg. A.V. Petrov. **Paratypes**: 12 ♂♂, 6 ♀♀ same place and date; 58 ♂♂ and 87 EE same place, but 20.I.1997, 19.IV.2010, 1.V.2012, 20.V.2014 ex *Flourensia angustifolia*, leg. A.V. Petrov (2 paratypes in MEFEIS, 2 paratypes in NMW, 2 paratypes in MSUC, 4 paratypes in TAMU, 151 paratypes in APP).

DESCRIPTION (Male): 2.4 mm long, 2.66 times as long as wide (Fig. 3a–d). Body unicoloured, dark brown, shining.

Head dark brown to black, mandibles and antennae dark brown. Frons weakly convex; surface of frons coarsely reticulate and shining, densely punctured by numerous large deep punctures, with a clear longitudinal raised median carina from epistoma to upper part of frons; vertex minutely and gently reticulate, without deep punctures; vestiture sparse, minute, more abundant and longer on epistoma (Fig. 3c); eyes large, coarsely faceted; funicle 5-segmented, club suboval with light short setae, sutures straight, sclerotized in lateral and mesal ends, first segment slightly narrower than second, third segment widest on club.

Pronotum dark brown, shining, 1.09 times as long as wide, with subparallel sides in basal half and evenly rounded from middle of pronotum toward anterior margin, anterior margin with ten serrations with rounded tips, summit anterior to center of pronotum, anterior slope with three transverse concentric rows of closely set coarse asperities and two incomplete rows of smaller randomly placed asperities nearer to summit; disc of pronotum from base to middle coarsely punctured by deep numerous punctures. Surface of disc finely shagreened, vestiture of recumbent brown setae mostly confined to anterior slope and lateral sides of pronotum. Scutellum flat, glabrous, shining, rounded.

Elytra shining, 1.66 times as long as wide, 1.76 times as long as pronotum; disc occupying almost 3/4 of elytral length, lateral sides subparallel, evenly rounded toward elytral declivity; striae not impressed, very small sparse punctures in rows, interstriae twice as wide as striae, shining, with coarse transverse wrinkles; declivity moderately bisulcate, steep, glabrous, shining, striae 1 and 2 with clear punctures, sutural interstria 1 elevated, with row of minute tubercles; interstria 2 flat, smooth, shining, interstriae 1 and 3 higher than interstria 2; crest of interstria 3 narrowly rounded, with row of minute tubercles; vestiture of brown setae on declivity and lateral sides of elytra (Fig. 3d).

Metepisterna punctured by sparse round punctures with long yellow setae, abdominal sternites punctured by numerous punctures with light setae. Legs reddish brown with short light setae.

Female: 2.34–2.45 mm, 2.50–2.60 times as long as wide, similar to male except more convex frons, without epistomal impression and short, poorly expressed carina in upper part of frons. Vestiture of frons similar to that of male (Fig. 3e).

DIAGNOSIS: The new species is distinguished from other *Pityophthorus* by transverse wrinkles on elytral interstriae and coarse frontal reticulation with a well-marked longitudinal raised median carina from epistoma to upper part of frons in male.

HOST: Bush of *Flourensia angustifolia* (DC.) S.F. BLAKE, 1836 (Asteraceae).

DISTRIBUTION: Known only from the type locality.

ETYMOLOGY: The new species named in honor of the Russian forest entomologist Dr. Alexey D. Maslov who dedicated his life to the study of Scolytidae.

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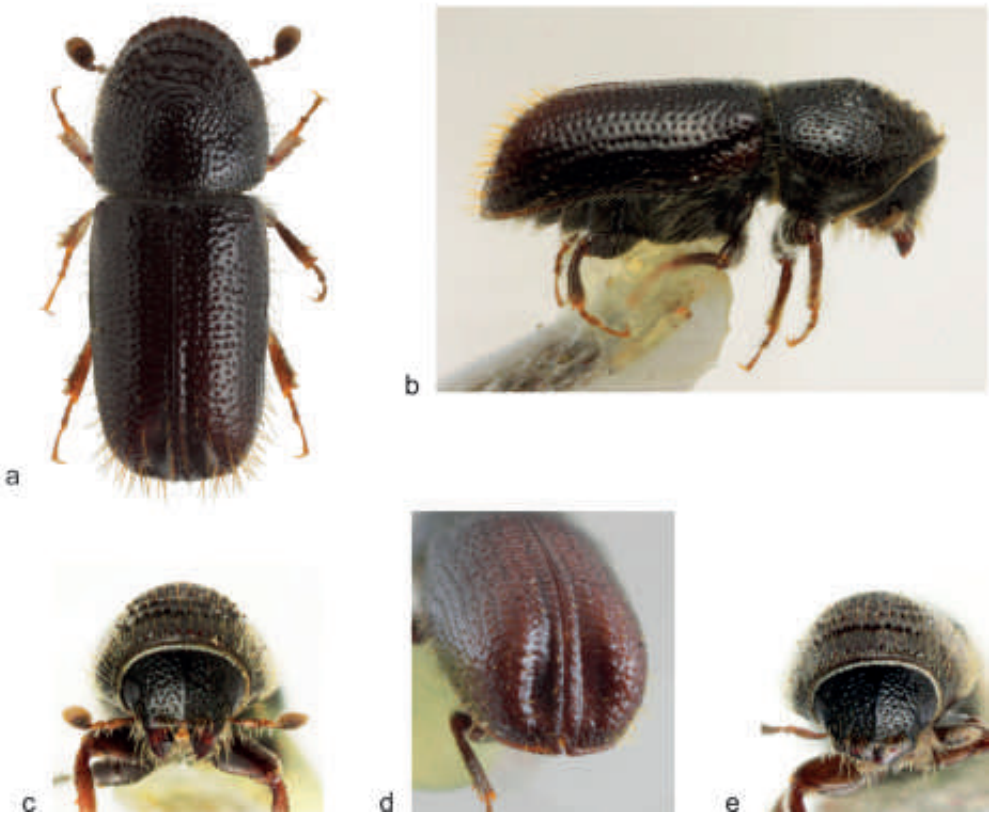

Fig. 3: *Pityophthorus maslovi*, a) dorsal view, b) lateral view, c) frons of male, d) caudal view, e) frons of female.

Pityophthorus tishechkini **sp.n.**

TYPE LOCALITY: Satipo Region, Cordillera Oriental, Junín Department, Peru.

TYPE MATERIAL: **Holotype** ♂ (ZMM): P E R U: JUNÍN: Cordillera Oriental, 4 km S of Calabaza vill, 3102 m a.s.l., 74°48'50.9"W 11°32'40.3"S, 27.III.2012, ex. *Oreopanax* sp., leg. A.V. Petrov. **Paratypes**: 22 ♂♂ and 49 ♀♀ same place and date; 26 ♂♂ and 45 ♀♀ same place, but 9.IV.2009, 25.XII.2010, 26.III.2013, 20.V.2014, ex. *Oreopanax* sp., leg. A.V. Petrov (2 paratypes in LSAM, 2 paratypes in MSUC, 4 paratypes in TAMU, 134 paratypes in APP).

DESCRIPTION (Male): 2.6 mm long, 2.88 times as long as wide (Fig. 4a–d). Body dark brown to black. Head black, mandibles reddish-brown; frons convex, smooth, shining; strongly, transversely impressed immediately above epistomal process, impression decreasing to upper level of eyes; lateral parts of epistoma with elevated cone-shaped calluses, the tips of which are directed to the center of the frons; surface of impression densely punctured by numerous punctures, above impression frons punctured by sparse punctures; vertex finely shagreened, without punctures; vestiture absent on frontal surface, long setae in center of epistoma (Fig. 4c); antenna with brown scape and funicle, club dark brown, oval, with short brown pubescence,

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suture 1 straight, sclerotized in lateral and mesal edges, suture 2 sclerotized in lateral edges, first segment slightly narrower than third, second segment widest.

Pronotum dark brown to black, shining, 1.09 times as long as wide, tear-drop shaped, widest at base; base of pronotum nearly arcuately bent, sides arcuately converging to rounded narrow anterior margin; anterior margin armed with about 10 small connected serrations, poorly defined summit 1/4 of length from anterior margin to base of pronotum, randomly placed asperities not forming defined rows on anterior slope (except one row in anterior margin); disc evenly coarsely punctured by deep punctures, vestiture of sparse, minute yellow setae in basal area and more abundant longer setae in anterior part of pronotum. Scutellum large, dark brown to black, shining, semicircular.

Fig. 4: *Pityophthorus tishechkini*, a) dorsal view, b) lateral view, c) frons of male, d) caudal view, e) frons of female.

Elytra black, shining, cylindrical, 1.66 times as long as wide, 1.64 times as long as pronotum. Disc occupying almost 3/4 of elytral length, lateral sides subparallel, evenly rounded toward elytral declivity. Discal striae not impressed, except stria 1; toward apex of elytra, punctures

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small, distance between punctures equal to their diameter; interstriae flat, wide, about 2.5 as wide as striae, smooth, weakly shining, punctured by very few small punctures with few very short erect yellow setae. Elytral declivity occupies 1/4 of elytral length, surface flat, smooth, shining, with clear punctures, stria 1 weakly impressed, sutural interstriae 1 and 3 weakly elevated, unarmed, interstria 2 narrowed on declivity. Lateral surface of elytra with vestiture confined to declivity on odd-numbered interstriae, erect yellow setae moderately long, sparse (Fig. 4d).

Fig. 5: *Pityophthorus vilcabambensis*, a) dorsal view, b) lateral view, c) frons of male, d) caudal view, e) frons of female.

Abdominal sternites horizontal, dark brown, with short light setae. Legs dark brown, with reddish brown tarsus.

Female: 2.00–2.45 mm, 2.50–2.60 times as long as wide, similar to male except frons without epistomal impression and elevated cone-shaped tubercles on lateral parts of epistoma; lower part of frons flat, with vestiture of numerous moderately long setae (Fig. 4e).

DIAGNOSIS: The new species is closely related to *Pityophthorus mandibularis* SCHEDL, 1951, but can be distinguished by numerous punctures forming weakly transverse impression on the frons of male, dark brown color of legs, except tarsus (legs of *P. mandibularis* light brown).

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Frons of female without brush of setae (frons of female *P. mandibularis* with central brush of long yellow setae).

HOST: Found on leaf stalks of *Oreopanax* sp. (Araliaceae).

DISTRIBUTION: Known only from the type locality.

ETYMOLOGY: The new species named in honor of the researcher of beetles of South America, my friend, entomologist Dr. Alexey K. Tishechkin.

***Pityophthorus vilcabambensis* sp.n.**

TYPE LOCALITY: Vilcabamba Mts., Cusco Department, Peru.

TYPE MATERIAL: **Holotype** ♂ (ZMM): P E R U: CUSCO: Cordillera Vilcabamba, 34.5 km NW from Cusco, Watá, 3840 m a.s.l., 72°15'07.1"W 13°20'59.6"S, 3.III.2010, ex. *Gynoxys* sp., leg. A.V. Petrov. **Paratypes:** 26 ♂♂, 62 ♀♀ same place but 9.IV.2009, 25.XII.2010, 27.III.2012, 4.–6.V.2014 (2 paratypes in MEFEIS, 2 paratypes in NMW, 2 paratypes in MSUC, 4 paratypes in TAMU, 76 paratypes in APP).

DESCRIPTION (Male): 2.09 mm long, 2.9 times as long as wide (Fig. 5a–d). Body bicoloured, pronotum, declivity, and mesal part of elytral disc reddish brown, shining.

Head dark brown, mandibles and antennae reddish brown. Frons flat, central part of frons glabrous smooth with a shining median line, with a longitudinal wide median carina from center to vertex, other areas of frons deeply coarsely punctured by numerous large punctures, vertex without punctures, finely shagreened (Fig. 5c); vestiture of numerous light setae more abundant on epistoma and lower part of frons; eyes with large facets; antennal scape elongate, funicle 5-segmented, club oval, sutures straight, sclerotized in lateral and mesal edges, segments similar in width, with first segment narrowest, third segment widest.

Pronotum cylindrical, reddish brown, shining; 1.0 times as long as wide, with parallel sides in basal half and evenly rounded toward anterior margin, anterior margin with 10 serrations, asperities on anterior slope randomly arranged, not in rows, summit at middle of pronotum, posterior areas shining, coarsely punctured by numerous deep large points. Surface of disc shagreened, vestiture of recumbent brown setae mostly confined to anterior slope and lateral sides of pronotum. Scutellum dark brown, large, flat, glabrous, shining, rounded.

Elytra bicolored, declivity and mesal third of elytral disc dark reddish brown, sides pale from stria 2 to costal margin; glabrous, shining, 1.9 times as long as wide, 1.95 times as long as pronotum; disc occupying almost 2/3 of elytral length, sides subparallel and tapering towards apex in posterior 1/3 of length. Discal striae not impressed, except stria 1, to base of elytra (except interstriae 1 and 2 on declivity) punctures round, large, the distance between points slightly less than their diameter; interstriae almost as wide as striae, flat, smooth, shining, punctured by sparse punctures; declivity bisulcate, glabrous, shining, sutural interstria 1 more elevated than interstria 2, with row of minute tubercles and long numerous setae; interstria 2 flat, smooth, shining, without setae; crest of interstria 3 higher than 2, narrowly rounded, with row of minute tubercles; dense vestiture of long brown setae on declivity and lateral areas of elytra (Fig. 5d).

Metepisterna and abdominal sternites with long yellow setae. Legs reddish brown with short light setae.

Female: 1.90–2.35 mm, 2.8–2.9 times as long as wide, similar to male except with more convex frons, which is covered by numerous long yellow setae (Fig. 5e).

DIAGNOSIS: The new species resembles *Pityophthorus minimus* WOOD, 2007 in color but is distinguished by the structure of the frons and the vestiture of the elytral declivity; from all

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species of *Pityophthorus* by combination of coloring, structure of frons, and character of the declivity.

NOTE: Elytra of 10 % of the paratypes (males and females) unicolored, with pale-yellow coloration; paratypes length 1.95–2.25 mm, 2.7–2.9 times as long as wide.

HOST: *Gynoxys* sp. (Asteraceae).

DISTRIBUTION: Known only from the type locality.

ETYMOLOGY: The new species is named after place of its origin, the "Cordillera Vilcabamba" (Vilcabamba Mountain Range) in Cusco Department, Peru.

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References

ALONSO-ZARAZAGA, M.A. & LYAL, C.H.C. 2009: A catalogue of family and genus group names in Scolytinae and Platypodinae with nomenclatural remarks (Coleoptera: Scolytidae). – Zootaxa 2258: 1–134.

BRIGHT, D.E. 1981: Taxonomic monograph of the genus *Pityophthorus* Eichhoff in North and Central America (Coleoptera: Scolytidae). – Memoirs of the Entomological Society of Canada 118: 1–378.

HAGEDORN, J.M. 1910: Coleoptera Fam. Ipidae. – In Wytsman, P.A. (ed.): Genera Insectorum, Pars 111. – Brussels: P. Wytsman, 178 pp., 14 pls.

HOPKINS, A.D. 1914: List of generic names and their type-species in the coleopterous superfamily Scolytoidea. – Proceedings of the United States National Museum 48: 115–146.

SMITH, S.M. & HULCR, J. 2015: *Scolytus* and other economically important bark and ambrosia beetles, pp. 495–584. – In Vega, F.E. & Hofstetter, R.W (eds.): Bark beetles. Biology and ecology of native and invasive species. – San Diego: Academic Press, 620 pp.

WOOD, S.L. 2007: Bark and ambrosia beetles of South America (Coleoptera: Scolytidae). – Provo: Monte L. Bean Life Science Museum, Brigham Young University, Utah, 900 pp.

WOOD, S.L. & BRIGHT, D.E. 1992: A catalog of Scolytidae and Platypodidae (Coleoptera), Part 2: Taxonomic Index. – Memoirs of the Great Basin Naturalist 13: 1–1553.

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