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New species, new records and synonymy of Mexican *Corthylus* Erichson, 1834 (Coleoptera: Curculionidae: Scolytinae)

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New species, new records and synonymy of Mexican *Corthylus* Erichson, 1834 (Coleoptera: Curculionidae: Scolytinae)

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Abstract. Ten new species of *Corthylus* Erichson (Coleoptera: Curculionidae: Scolytinae) are described from Mexico: *Corthylus spinosulus*, **new species**, *C. cristatus*, **new species**, *C. cristatulus*, **new species**, *C. granulocristatus*, **new species**, *C. poblanus*, **new species**, *C. ibarrai*, **new species**, *C. latisetosus*, **new species**, *C. burgosi*, **new species**, *C. granulosus*, **new species**, and *C. microcorthyloides*, **new species**. *Corthylus uniseptis* Schedl, 1961 is synonymized with *C. parvulus* Blandford, 1904, **new synonymy**. Additional distribution records are given for Mexican species of *Corthylus*.

Key words. Ambrosia beetles, sexual dimorphism, declivital morphology.

ZooBank registration. urn:lsid:zoobank.org:pub:CF7B0E89-C497-408C-B359-B33939AB5C58

Introduction

Over the last several years new species of *Corthylus* Erichson, 1834 from Mexico have come to light from revision of collections and new field work. These are described here to make names available for several pending publications. At present it is not possible to intercalate these new species into either of Wood's keys (1982: North and Central America; 2007: all species). Wood's keys generally require females, even though many species are known only from males. A completely new key would be required and is in process. Patterns of sexual dimorphism vary in different genera of the Corthylini. In the genus *Corthylus* sexual differences are confined to the frons and antenna. There are no known cases of dimorphism in size or elytral characters. It is very likely that the majority of species could be identified by body size, proportions, and characters of the pronotum and elytra. Previously described species are figured to aid in the identification of these new species with the aid of existing keys by Wood (1982, 2007). When possible indications of where these new species would come out in his keys are indicated and comments on similar species are included to help separate similar new and previously described species.

Materials and Methods

Specimens cited, including primary types, are deposited in the following collections:

BMNH Natural History Museum, London, United Kingdom.
CEAM Colección Entomológica, Centro de Fitopatología, Colegio de Postgraduados, Montecillo, Estado de México.
CNCI Canadian National Collection, Ottawa, Canada.
CNIN Colección Nacional de Insects, Instituto de Biología, Universidad Autónoma de México, Mexico City.
IEXA Instituto de Ecología, Xalapa, Veracruz.
NMW Naturhistorisches Museum Wien, Vienna, Austria.
RHTC Robert H. Turnbow, Jr., personal collection, Enterprise, AL
TAMU Texas A&M Insect Collection, College Station, TX.
UTIC University of Texas Insect Collection, Integrative Biology, University of Texas at Austin, Austin, TX.

UFFE University of Florida, Forest Entomology Laboratory, Gainesville, FL.
USNM National Museum of Natural History, Smithsonian Institution, Washington, DC (Including Stephen L. Wood Collection).

Wood (1982, 2007) generally included measurements of overall body length and width and the ratio of these two. During the descriptions of the new species it became apparent that other measurements and proportions were informative in distinguishing similar species, especially those with truncate elytral declivities. In *Corthylus* there is no appreciable difference between the width of the pronotum and of the elytra in dorsal view. However, the ratio of the length of the elytra with respect to total length and the ratio of the length to width of the elytra appear to be diagnostic in some cases.

For purposes of documentation, full label data and depository collection are cited for all specimens in photographs in Appendix 1. All of these specimens bear a green label with a graphic of a camera and the text "Atkinson YYYY (year)."

New Synonymy

Corthylus parvulus Blandford

Fig. 1

Corthylus parvulus Blandford 1904: 261
Corthylus uniseptis Schedl 1961: 229 (**new synonymy**)
Corthylus reburrus Bright 1972: 1375; = *uniseptis* Schedl, Wood 1974: 280

Both *C. parvulus* Blandford and *C. uniseptis* Schedl were described from unique male specimens, from Las Mercedes, Quetzaltenango, Guatemala and Córdoba, Veracruz, Mexico, respectively. Wood (1982) stated that *C. parvulus* is "virtually identical with *uniseptis*". I have examined the primary types of *C. uniseptis* Schedl (NMW), *C. parvulus* Blandford (BMNH), and a high–resolution photograph of the holotype of *C. reburrus* Bright (CNCI), previously synonymized with *C. uniseptis* by Wood (https://cnc.agr.gc.ca/taxonomy/Specimen.php?id=3824). Only a single species is present known from Guatemala, Chiapas, Veracruz, and Jalisco at low to intermediate elevations.

Specimens seen. Guatemala: Quetzaltenango: Las Mercedes, 914 m (BMNH, male, holotype *Corthylus parvulus* Blandford); Mexico: Veracruz, Córdoba, A. Fenyes (NMW, male paratype); Veracruz: Uxpanapa, 23-V-1981, ex *Heliocarpus appendiculatus* (Malvaceae), A. Equihua M., S-270 (TAMU, 14, CEAM, 5); Chiapas, Palenque Ruins, 22-VI-1969, D.E. Bright (CNCI, photographs female holotype); Jalisco: El Tuito, 640 m, 29-V-1982, T.H. Atkinson & A. Equihua M., S-712 (TAMU, 5, CEAM, 8).

New Species

Corthylus spinosulus Atkinson, new species

Fig. 2 A–D; Fig. 3 A, B

Diagnosis. This species would key out to couplet 43 in Wood's 1982 key along with *C. spinosus* Wood (Fig. 3 C–D). An additional species, *C. spinipennis* Wood (2007: 850), was described from Costa Rica after 1982 and would also key to the same couplet (Fig. 3 E–F). All three species share the character of large, acute denticles on the elytral declivity. The species described here is larger than the other two, has an elytral declivity that is more gradually rounded in lateral profile, and has proportionately smaller and less acute denticles on the declivity. All three species are known only from their unique holotypes, a female for *C. spinosulus* and males for *C. spinosus* and *C. spinipennis* (Fig. 3).

Female. Length: 2.70 mm, maximum width: 1.14 mm; length of elytra: 1.65 mm; length to width: 2.4; elytral length/total length: 0.618; elytral length/width: 1.45. (n = 1). Color dark brown, slightly paler at base of elytra.

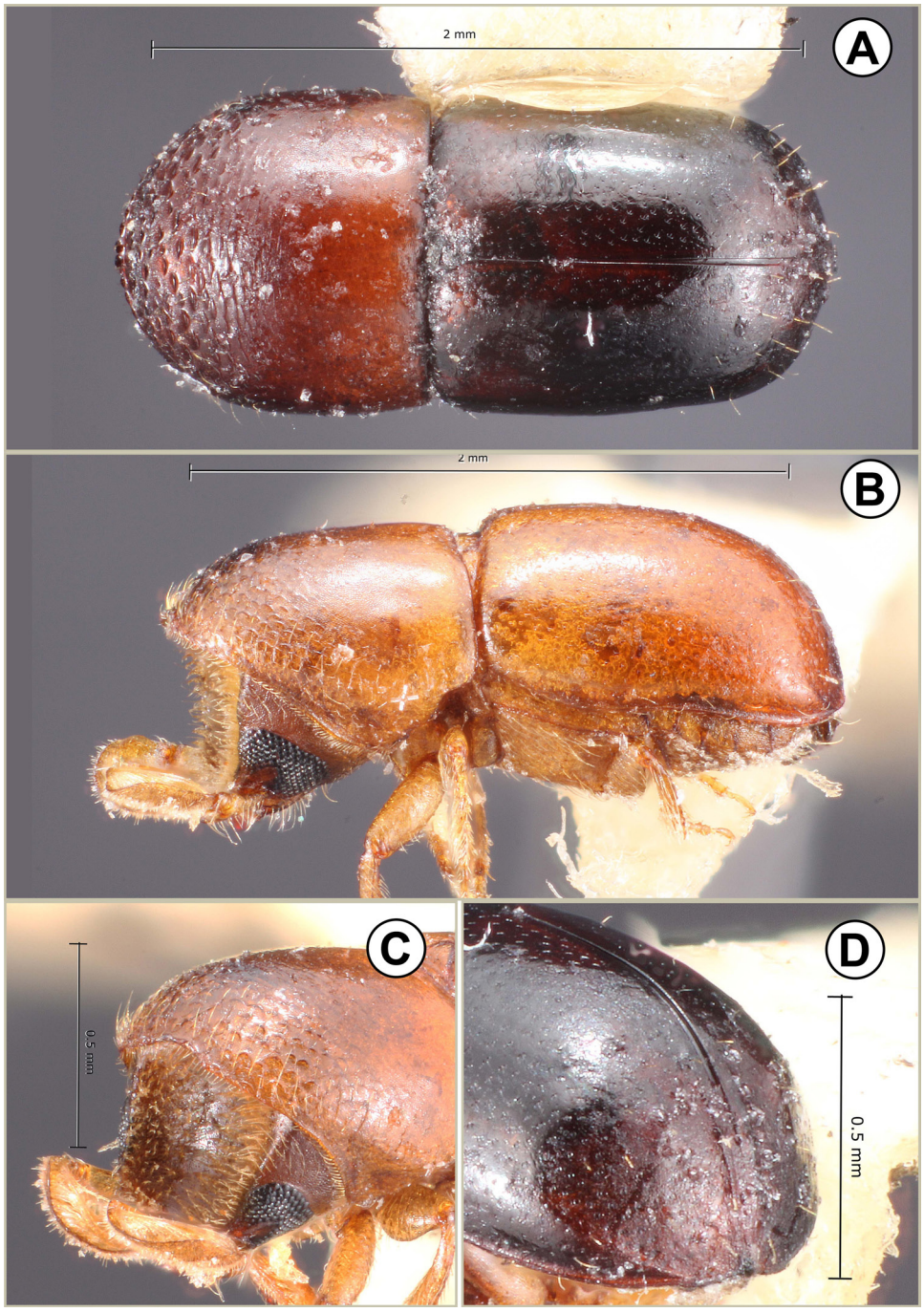

Figure 1. *Corthylus parvulus* Blandford, female. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author.

Frons evenly concave from epistoma to vertex, weakly impressed longitudinally in middle up to a low, blunt elevation at upper level of eyes. Surface shallowly, densely punctured throughout. Vestiture of short, yellowish setae, uniform in length over entire concavity, without longer fringes at the sides or vertex. Antennal club slightly asymmetrical, 1st suture septate, 2nd marked by an external groove. Well-developed cirrus of reddish-brown setae, not exceeding the width of the club.

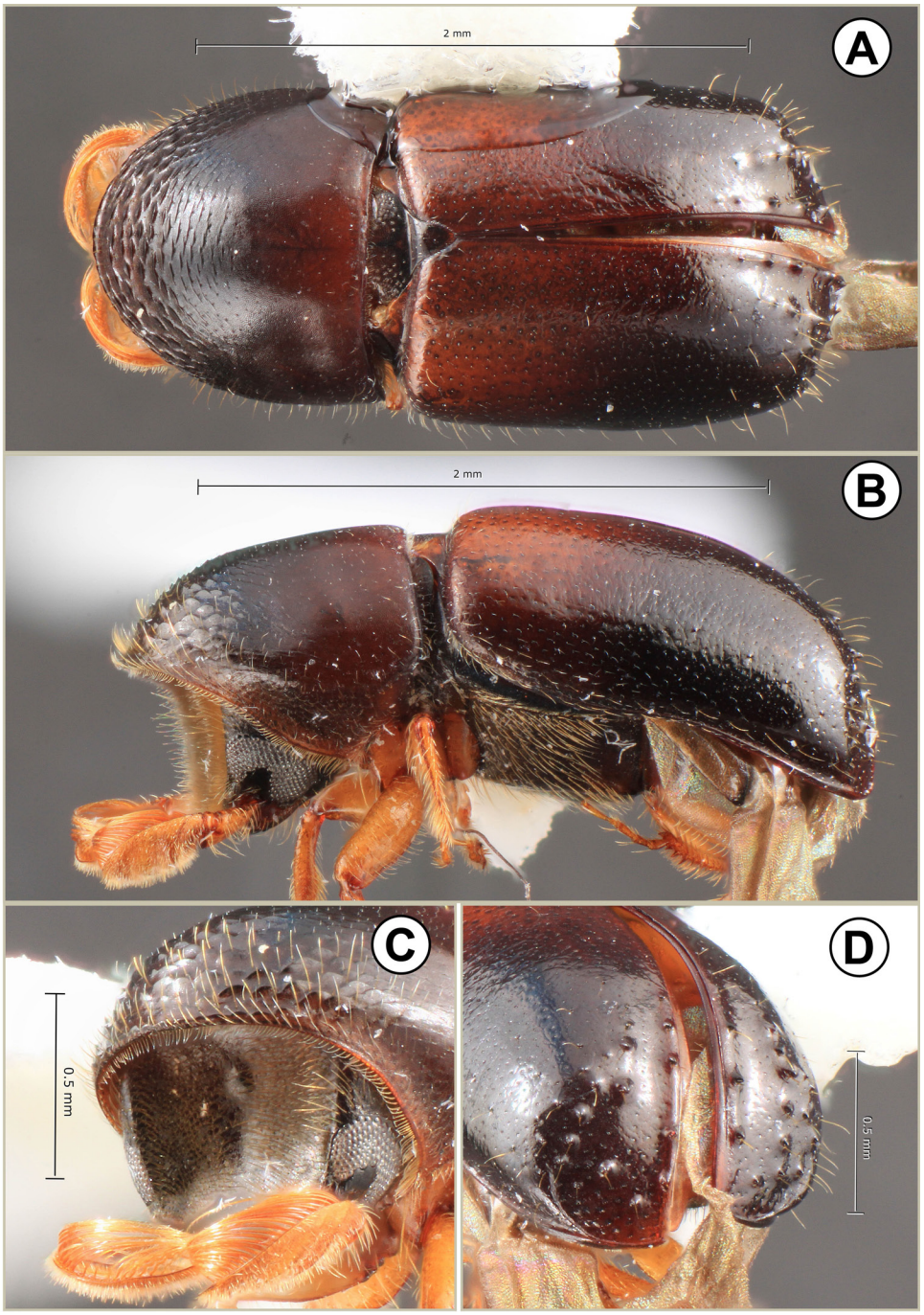

Figure 2. *Corthylus spinosulus*, new species, female holotype. **A**) Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author.

Anterior margin of pronotum rounded, unarmed. Asperities low, small, reduced to impressed lines at summit. Disc of pronotum smooth, shining. Shallow punctures widely separated by more than 5x the diameter of punctures.

Striae and interstriae on elytral disc not impressed, punctures shallow and confused, without associated setae. Declivity evenly rounded in profile. A well-developed, elevated marginal crest extends from the declivital suture to about interstriae 4, about 10% of the declivital circumference. Striae poorly defined on declivity, with

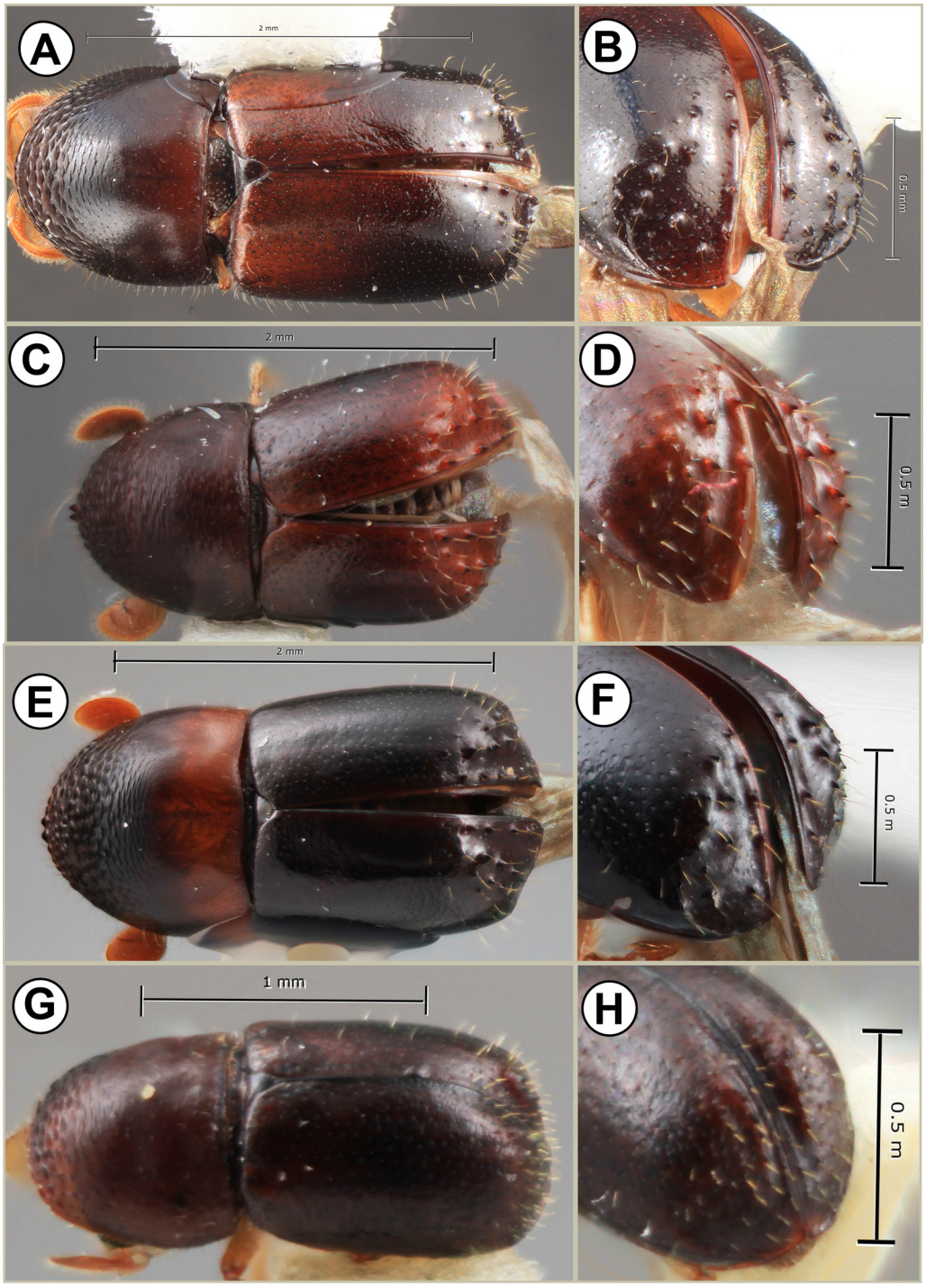

Figure 3. Species of *Corthylus* with acute spines on declivity or with interstriae 3 curved and serrate (1 of 2). **A, B**) *C. spinosulus*, new species, holotype. **C–D)** *C. spinosus* Wood, holotype. **E, F)** *C. spinipennis* Wood, holotype. **G, H)** *C. senticosus* Wood, holotype. Photographs A–B by the author, C–H by S.M. Smith (Copyright National Museum of Natural History, Smithsonian Institution, Washington, D.C., published by permission).

strial and interstrial punctures confused. Declivital interstriae 1 slightly elevated (but not costate) with 5 widely spaced blunt tubercles, these increasing in size posteriorly. Interstriae 2 weakly impressed, punctures confused, with a blunt tubercle near the apical margin. Interstriae 3 weakly elevated, with 4–5 blunt tubercles, these slightly larger than those on interstriae 1. Additional smaller tubercles on interstriae 5 on declivital face.

Male. Frons flattened, slightly impressed at epistomal margin. Surface of frons without setae, with widely spaced punctures. A sparse row of setae just above epistoma. Antennal club widened distally.

Pronotum and declivity similar to female. The allotype male has several small denticles on the upper portion of interstriae 2 that are not present in the holotype female. Without more specimens it is not clear whether or not this is a sexual difference.

Type material. Holotype female. Mexico: Chiapas, Chiquihuites, 15.09 N, 92.0798 W, 1,700 m, 5–11-V-2013, flight intercept trap with ethanol and methanol, F. Infante (CNIN). Allotype male. Same data except 3-XII-2013, UFFE:12087 (UFFE in ethanol).

Etymology. The species name is chosen to indicate the similarity to *C. spinosus* Wood.

Species with third declivital interstriae serrate and displaced mesally towards suture

Fig. 3 G, H; Fig. 4 A–H.

The following four species have the third declivital interstriae strongly elevated with prominent granules giving a serrate appearance. These interstriae are in the "normal" position at the base and apex of the declivity but strongly displaced mesally towards the elytral juncture in the center of the declivity. The degree of displacement is so pronounced in several of these species that the elevation appears to be on the second interstriae (Fig. 4, A–F). These species would key out to couplet 40 in Wood's 1982 key but would not go further. They would key to couplet 87 in his 2007 key but would not progress beyond this point. The declivity in these species resembles that of *C. senticosus* Wood (Fig. 3, G, H), but the female frons is totally different and the depth and size of the punctures on the disc of the declivity is much less pronounced. In the three of the four species described here the female frons is convex with no pubescence or surface features in the lower portion and with short, straight setae along the upper and lateral margins; in *C. senticosus* there are large, yellow spongy areas occupying most of the frontal concavity, a prominent elevation above the epistoma, and a recurved margin of long hairs along the vertical margin (Wood, 1986: 271). The female of *C. poblanus* is not known.

Corthylus cristatus Atkinson, new species

Fig. 4 A, B; Fig. 5 A–D

Diagnosis. This species, *C. cristatulus,* **new species**, and *C. granulocristatus,* **new species**, are quite similar in general appearance (Fig. 4). They can be distinguished from each other by body size, size and density of punctures on the declivity, and by variations in the size of the elevated, serrate crest on the declivity. This crest is the sharply elevated third interstriae. This crest is strongly curved towards the median line in the middle of the declivity, strongly reducing the width of interstriae 1 and 2, but in "normal" position at the base and apex of the declivity. The posterolateral area of the declivity is strongly elevated (couplet 1, Wood 1982). The combination of the curved, serrate declivital crest, elevated posterolateral line on the declivity which is otherwise convex, and the deep confused punctures on the elytra are unique to this group among the known species of the genus. *Corthylus cristatus* is distinguished from the other two by the closely spaced, large confused punctures on the elytral disc, separated by their own diameter. The declivital crest on interstriae 3 is the most pronounced in height and curvature to the point that interstriae 2 are basically obsolete in the middle of the declivity.

Female. Length: 3.12 mm (2.97–3.33), maximum width: 1.23 mm (1.13–1.27); length of elytra: 1.23 mm (1.67–1.90); length to width: 2.5; elytral length/total length: 0.58; elytral length/width: 1.47. (n = 4, 3 males, 1 female). Color uniformly black.

Frons evenly concave from epistoma to vertex. Lower surface with widely spaced, low granules, each associated with a short seta. Setae becoming denser on sides and upper portion of frons, marginal setae only slightly longer than those in center, not forming incurved margins. Area just above epistoma impunctate. Antenna slightly

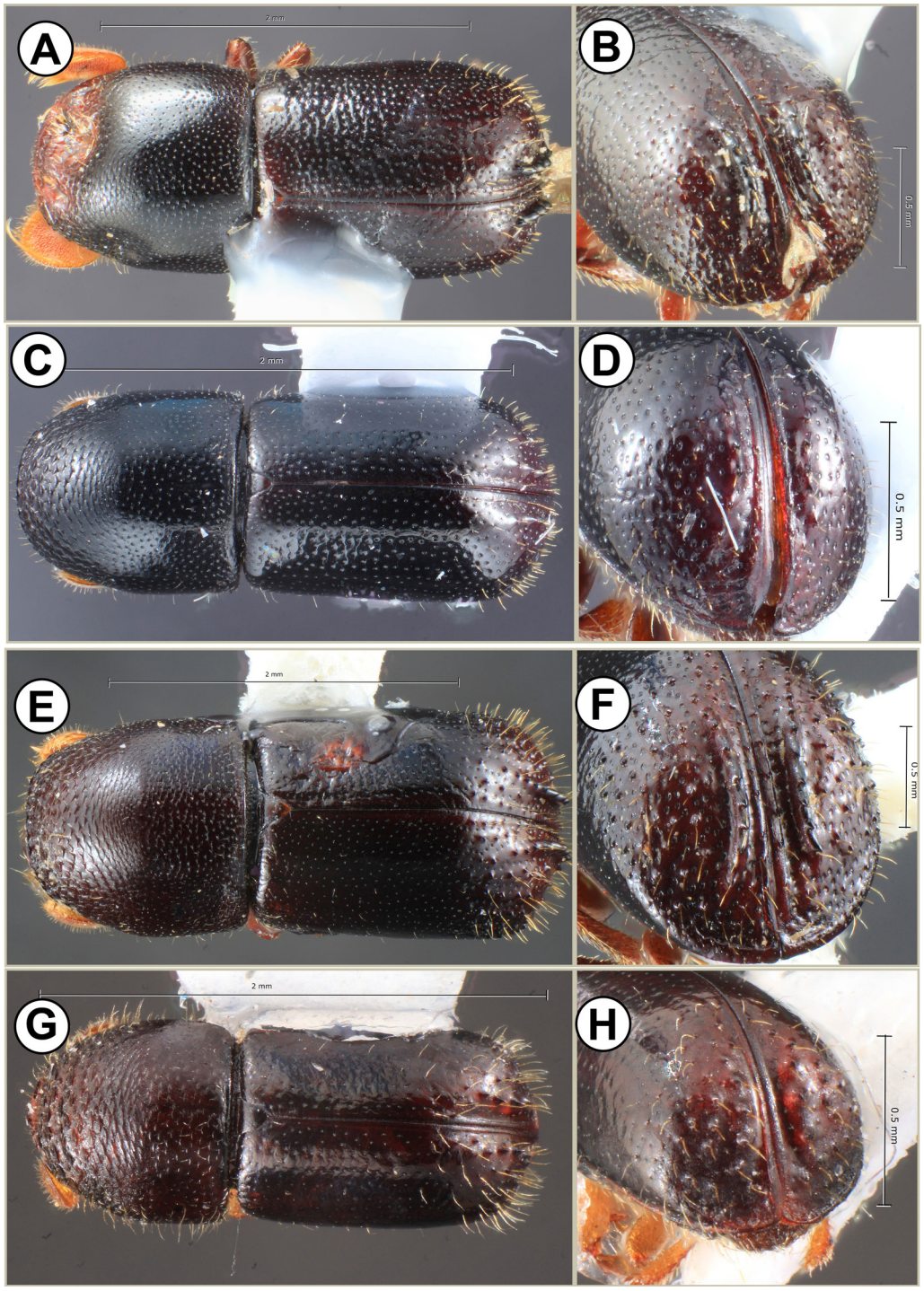

Figure 4. Species of *Corthylus* with acute spines on declivity or with interstriae 3 curved and serrate (2 of 2). **A, B)** *C. cristatus* new species, holotype. **C, D**) *C. cristatulus* new species, holotype. **E, F)** *C. granulocristatus* new species, holotype. **G, H)** *C. poblanus* new species, holotype. All photographs by the author.

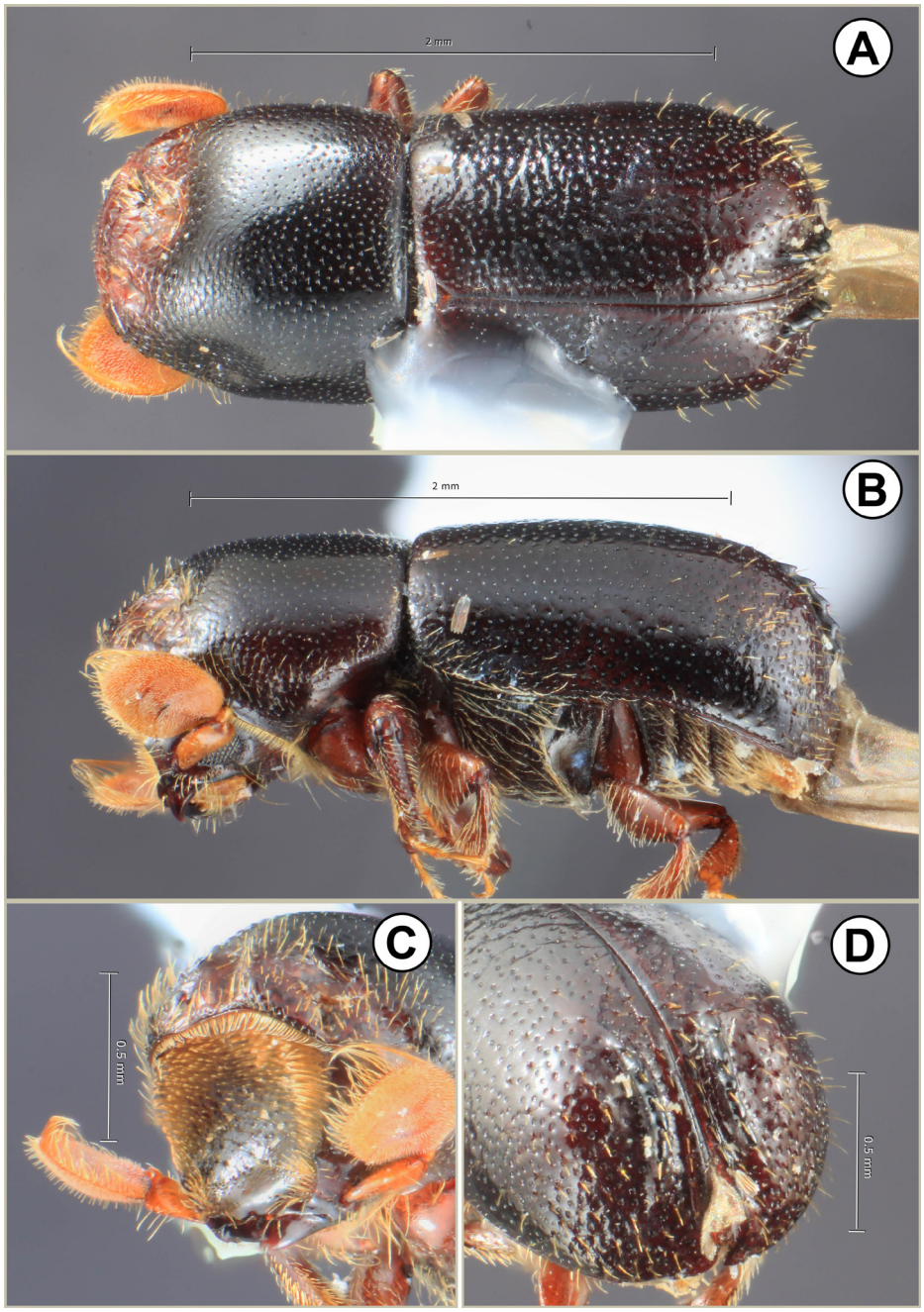

Figure 5. *Corthylus cristatus*, new species, female holotype. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. Note: anterior portion of pronotum is abnormal, whether from damage to the specimen or abnormal development. All photographs by the author.

asymmetrical, 1st and 2nd sutures indicated by external grooves, 1st partly septate. Cirrus very short, longest setae less than 1/2 the width of the antennal club.

Anterior margin of pronotum broadly rounded, unarmed. Asperities on anterior slope not elevated, weakly developed, obsolete at summit. Pronotal disc shining, with deep punctures, separated by about 3× their diameters.

Striae and interstriae indistinct on elytral disc, all punctures similar in size and completely confused, those at base of elytral about twice as large as punctures on pronotal disc and separated by about twice their diameters. Declivity abruptly curved in profile. Elevated postero-lateral crest at elytral apex weakly developed, partly

obscured by deep confused punctures. Striae and interstriae indistinct on declivity, but short, yellow setae present on odd-numbered interstriae. Interstriae 1 slightly costate, without or with very weakly developed granules. Interstriae 2 impressed, extremely narrow in declivital face. Interstriae 3 strongly elevated, with contiguous, pointed granules, giving a serrate impression, strongly curving towards declivital suture in middle, curving outwards again towards apex, serrate elevation not reaching bottom 1/3 of declivity. Much smaller granules irregularly spaced exterior to interstriae 3.

Male. Similar to female except for frons and antenna. Frons evenly convex, shining, with widely separated, deep punctures, vestiture absent. A weak transverse impression above epistoma. Antenna suboval, without longer, marginal setae.

Type material. Holotype female. Mexico: Veracruz, El Santuario, campus INECOL, 28-III-2016, bottle trap with ethanol, L.A. Ibarra and A. Gil V. (CNIN). Allotype male. Veracruz, El Santuario, campus INECOL, 9-V-2016, bottle trap with ethanol, A. Gil V. (CNIN); Paratypes. Veracruz, El Santuario, campus INECOL, 3-II-2016, bottle trap with ethanol, L.A. Ibarra and A. Gil V. (IEXA, 1m, UTIC, 1m); Chiapas: Chiapas, Union Juarez; 15.1597°N,92.17°E; IV-2013, cloud forest with pines and coffee; Francisco Infante, UFFE:11049 (UFFE, 2 f in ethanol); Guatemala: El Progreso, 29 km N. San Augustín, 21-IV-1990, 650 m, J.E. Wappes (TAMU, 1 m).

Comments. The anterior portion of pronotum in the female holotype in Fig. 5 is abnormal, whether from damage to the specimen or abnormal development.

Etymology. The name is chosen for the prominent curved crest on the elytral declivity.

Corthylus cristatulus Atkinson, new species

Fig. 4 C, D; Fig. 6 A–D

Diagnosis. This species is distinguished from *C. cristatus* and *C. granulocristatus* by the smaller size and less pronounced crest of interstriae 3, and smaller, less closely spaced punctures on the elytra.

Female. Length: 2.46 mm, maximum width: 0.93 mm; length of elytra: 1.39 mm; length to width: 2.6; elytral length/total length: 0.57; elytral length/width: 1.49. (n = 4). Color dark black.

Frons evenly concave from epistoma to vertex. Lower surface of frons with widely spaced, low granules, each associated with a short seta. Setae sparse, more abundant on sides and upper portion of frons, marginal setae only slightly longer than those in center, not forming incurved margins, absent from lower frons. Area just above epistoma impunctate. Antenna slightly asymmetrical, 1st and 2nd sutures indicated by external grooves, 1st partly septate. Cirrus absent, marginal setae on club sparse, short, less that ¼ length of club.

Anterior margin of pronotum broadly rounded, unarmed. First row of asperities posterior to margin suberect. Remaining asperities on anterior slope not elevated, weakly developed, obsolete at summit. Pronotal disc shining, with deep punctures, separated by about 3× their diameters.

Striae and interstriae indistinct on elytral disc, all punctures similar in size and completely confused, those at base of elytral about the same size as punctures on pronotal disc and separated by about twice their diameters. Declivity abruptly curved in profile. Elevated crest at elytral apex well developed, partly obscured by deep confused punctures. Striae and interstriae indistinct on declivity, but short, yellow setae present on odd-numbered interstriae. Interstriae 1 elevated, with very weakly developed granules. Interstriae 2 impressed, narrower on declivital face. Interstriae 3 elevated, with contiguous, pointed granules, giving a serrate impression, strongly curving towards declivital suture in middle, curving outwards again towards apex, serrate elevation not reaching bottom ½ of declivity. Much smaller granules irregularly spaced exterior to interstriae 3.

Male. Similar to female except for frons and antenna. Frons evenly convex, shining, with widely separated, deep punctures, vestiture absent. A weak transverse impression above epistoma. Antenna suboval, without longer, marginal setae.

Type material. Holotype female. Mexico: Veracruz, El Santuario, campus INECOL, 15-III-2015, bottle trap with ethanol, L.A. Ibarra (CNIN). Allotype male. Same data except 15-IX-2015 (CNIN). Paratypes. Same data except different collection dates (2015–2016) (IEXA, 2, UTIC, 2, USNM, 2).

Etymology. The name is chosen for the prominent curved crest on the elytral declivity. This species is very similar to *C. cristatus* but smaller, hence the diminutive form of the name.

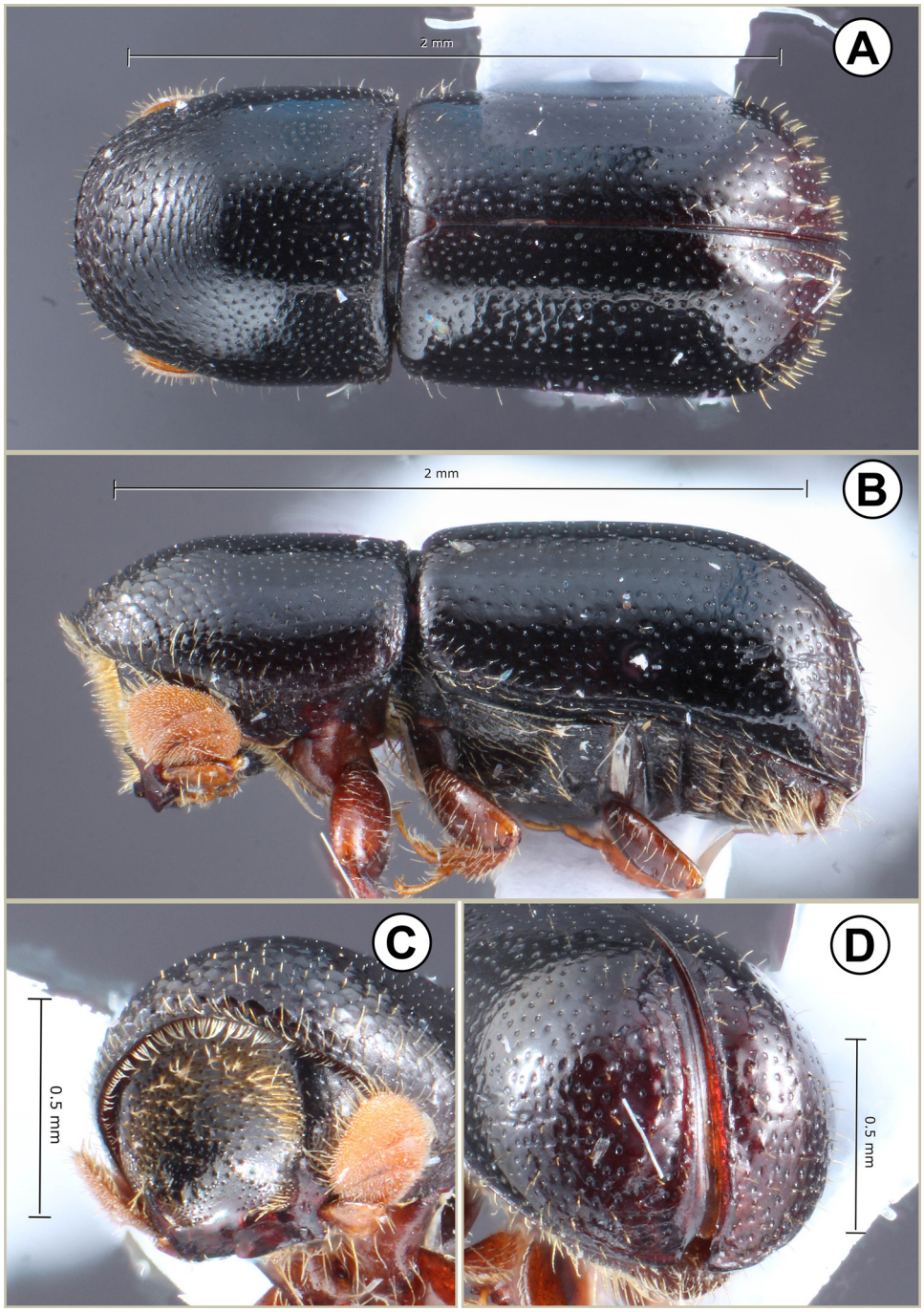

Figure 6. *Corthylus cristatulus*, new species, female holotype. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author.

Corthylus granulocristatus Atkinson, new species

Fig. 4 E, F; Fig. 7 A–D

Diagnosis. This species is similar to *C. cristatus* and *C. cristatulus* with respect to the elevated serrate crest on interstriae 3 and the dense punctures of the elytra. It is distinguished from these by the presence of pointed granules at the base of all declivital interstriae.

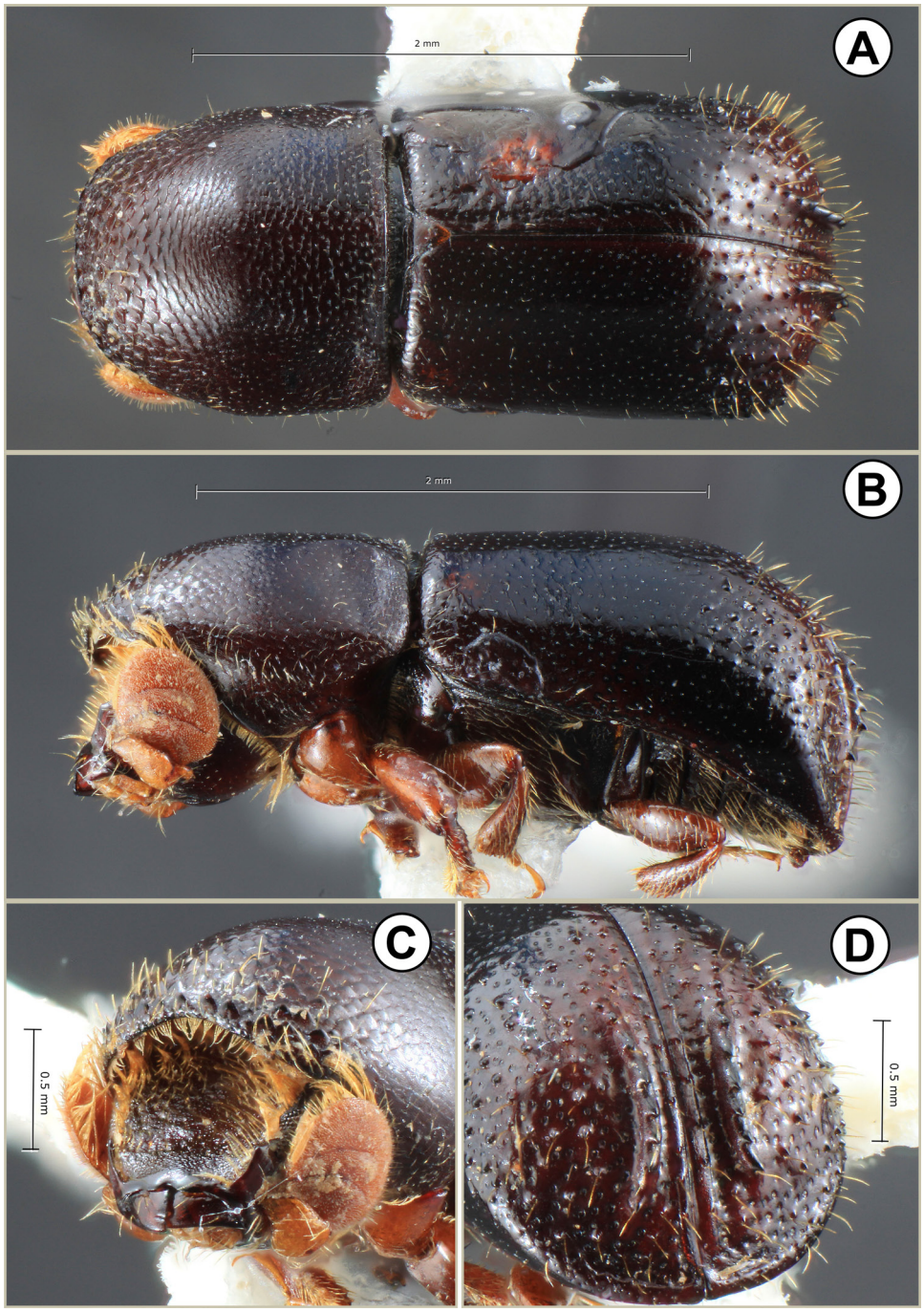

Figure 7. *Corthylus granulocristatus*, new species, female holotype. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author.

Female. Length: 1.87 mm, maximum width: 0.77 mm; length of elytra: 1.07 mm; length to width: 2.4; elytral length/total length: 0.57; elytral length/width: 1.39. (n = 1).

Frons evenly concave from epistoma to vertex. Lower surface reticulate, without vestiture. Sparse setae more abundant on sides and upper portion of frons, marginal setae longer than those nearer the center, slightly incurved margins. Antenna slightly asymmetrical, 1st and 2nd sutures indicated by external grooves, 1st partly septate. Cirrus short, longest setae less than length of 3rd segment of antennal club.

Anterior margin of pronotum broadly rounded, unarmed. First row of asperities posterior to margin erect. Remaining asperities on anterior slope not elevated, weakly developed, obsolete at summit. Pronotal disc shining, with dense, deep punctures, separated by about 2× their diameters, each associated with a short recumbent seta, about length of spacing between punctures.

Striae and interstriae indistinct on elytral disc, all punctures similar in size and completely confused, those at base of elytral about the same size as punctures on pronotal disc and separated by about twice their diameters. Declivity abruptly curved in profile. Elevated crest at elytral apex well developed, extending at least to interstriae 5. Striae and interstriae indistinct on declivity, but short, yellow setae present on odd-numbered interstriae. Interstriae 1 elevated, with very weakly developed granules. Interstriae 2 impressed, very narrow on declivital face. Interstriae 3 elevated, with contiguous, pointed granules, giving a serrate impression, strongly curving towards declivital suture in middle, curving outwards again towards apex, serrate elevation not reaching bottom ⅓ of declivity. Much smaller granules irregularly spaced exterior to interstriae 7, on face of declivity and posterior portion of elytral disc.

Male. Unknown.

Type material. Holotype female. Mexico: Chiapas, 11 km NE San Cristobal, Hwy. 199, 2438 m, 28-V-1987, black light plus mercury vapor, D.A. Rider and E.G. Riley. (USNM). This specimen was originally in the Louisiana State Arthropod Museum.

Etymology. The name is chosen for the prominent curved crest on the elytral declivity and the prominent pointed granules on other elytral interstriae.

Corthylus poblanus Atkinson, new species

Fig. 4, G, H; Fig. 8 A–D

Diagnosis. This species resembles *C. cristatus*, *C. cristatulus*, and *C. granulocristatus* except that the tubercles on declivital interstriae 3 are separated at their bases and do not form a serrate crest. It resembles *C. senticosus* but is much larger and has a different arrangement of tubercles on the declivity.

Female. Unknown.

Male. Length: 2.0 mm, maximum width: 0.79 mm; length of elytra: 1.16 mm; length to width: 2.5; elytral length/total length: 0.58; elytral length/width: 1.47. (n = 1).

Frons evenly concave from epistoma to vertex. Entire visible surface coarsely, sparsely punctate. Antenna slightly asymmetrical, 1st and 2nd sutures indicated by external grooves, 1st septate.

Anterior margin of pronotum broadly rounded, with a pair of asperities at center. Asperities on anterior slope coarse, elevated, weakly developed, obsolete at summit. Pronotal disc shining, with, deep punctures, separated by about 2× their diameters, each associated with a short recumbent seta, about length of spacing between punctures. These punctures in center of disc associated with very faint transverse lines.

Striae and clearly marked on disc by shallow puncture; interstrial punctures less pronounced. Declivity abruptly curved in profile. Elevated crest at elytral apex well developed, extending at least to interstriae 5. Striae and interstriae indistinct on declivity, but yellow setae present on odd-numbered interstriae, their length subequal to distance between striae. Declivity sulcate. Interstriae 1 slightly elevated, without granules. Interstriae 2 impressed, very narrow on declivital face. Interstriae 3 with contiguous, granules, strongly curving towards declivital suture in middle, curving outwards again towards apex, row of tubercles almost reaching apex. Much smaller granules irregularly spaced on interstriae 5 and 7, on face of declivity.

Type material. Holotype male: Mexico: Puebla, Mpio. Tetela de Ocampo, Huerto Don Lucas, 19.5313 N, 97.4834 W, 10-V-2018, 1,701 m (CNIN).

Etymology. The name is based on the Spanish word, *poblano,* a resident of the state of Puebla.

Species with truncate elytral declivity

Fig. 9, 10

Currently ten species of *Corthylus* are known from Mexico and Central America with a strongly truncate elytral declivity bordered by a raised, circumdeclivital ring. Three of these are described below. These species would key

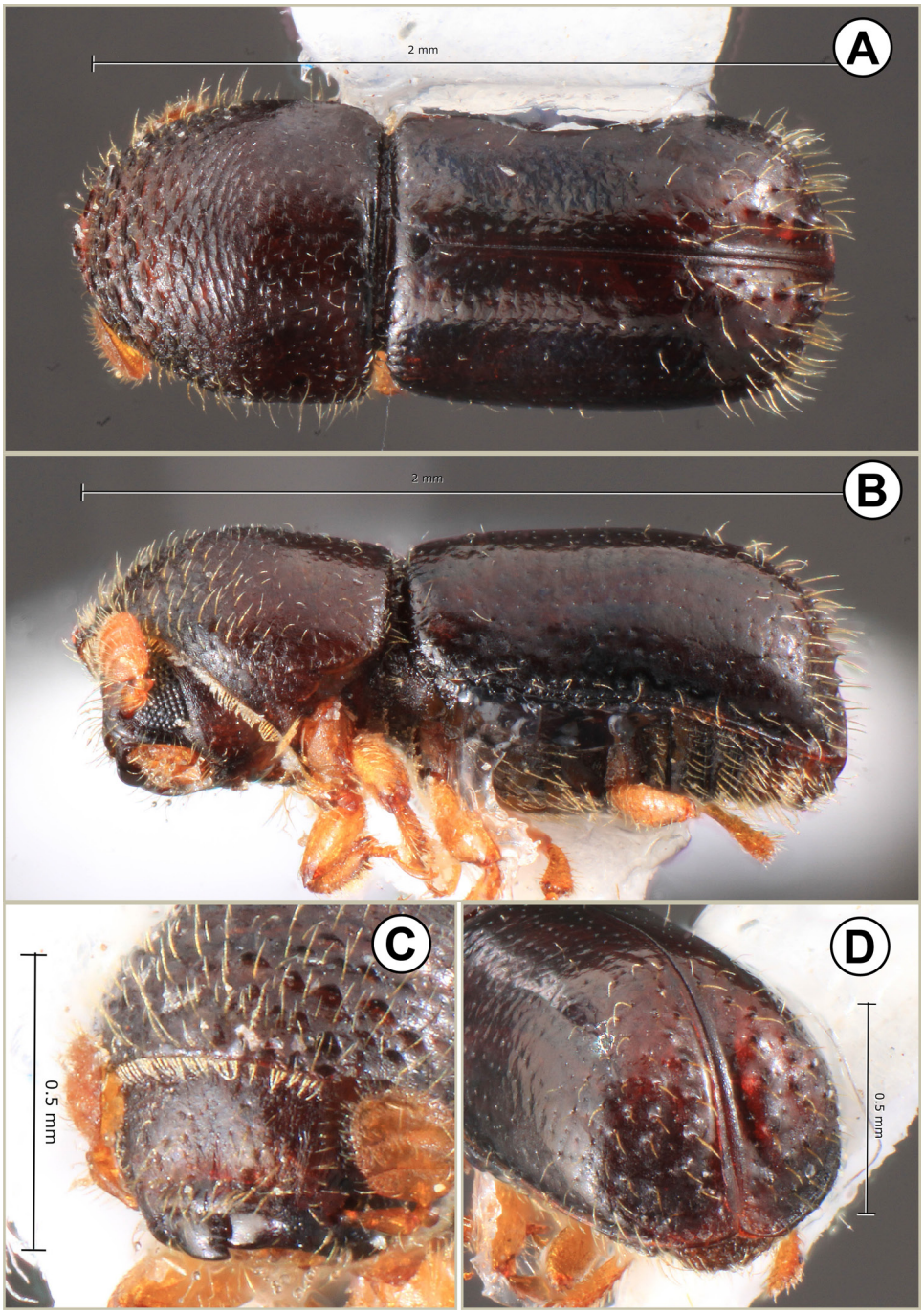

Figure 8. *Corthylus poblanus*, new species, male holotype. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author.

to couplet 50 in Wood's 1982 key and to couplet 110 in Wood's 2007 key along with 7 other previously described species (Figs. 9,10). While these can be distinguished by characters of the female frons, most specimens collected in traps are males. All can be distinguished by overall size, proportions, details of the circumdeclivital ring. Some diagnostic characters of these 10 species are summarized in Table 1. The degree of "completeness" of the raised circumdeclivital ring varies from 100% (*C. eichhoffi* Schedl, *C. praeustus* Schedl) to 50% (*C. mexicanus* Schedl). In

Table 1. Comparison of Mexican and Central American *Corthylus* species with truncate declivities. Declivital crest: degree of elevated margin on circumdeclivital ring, scale of 1–10 where 10 represents a complete ring without interruption. Armature of declivital interstriae 1 and 3: costate= prominently elevated; serrate=elevated with prominent denticles; dentate=denticles prominent but not joined into single structure; elevated=elevated with respect to interstria 2 but not prominently so; inflated=interstrial area higher than adjacent interstriae but not costate.

Species	Length (mm)	Length/ Width	Elytra length/ length	Decliv. crest	Interstr. 1	Interstr. 3
C. burgosi, sp. nov.	2.4	2.5	0.51	8	costate	inflated
C. concisus Wood	2.3	2.1	0.52	9	costate	serrate
C. eichhoffi Schedl	2.3	2.2	0.53	10	elevated	
C. latisetosus, sp. nov.	1.6	2.6	0.52	8	costate	
C. mexicanus Schedl	2.3	2.3	0.59	5	dentate	dentate
C. petilus Wood	2.0	2.8	0.60	9	elevated	
C. praeustus Schedl	1.4	2.3	0.51	10	serrate	
C. procerus Bright	1.6	2.1	0.56	9	costate	
C. serratus Wood	2.2	2.5	0.52	7	serrate	dentate
C. ibarrai, sp. nov.	2.1	2.5	0.57	9	costate	

other species the upper portion of the ring is not complete near the sutural line (*C. concisus* Wood, *C. ibarrai* new species). The overall body proportions vary from 2.8× length/width (*C. petilus* Wood) to 2.1 (*C. procerus* Bright).

Corthylus ibarrai Atkinson, new species

Fig. 9 A, B; Fig. 11 A–D

Diagnosis. In this species the circumdeclivital ring is only about 95% complete, with a slight notch along the midline. The ring itself is carinate and flat inside. The first interstriae on the declivity are costate in the mid area, diverging slightly from the midline posteriorly.

Female. Length: 2.14 mm, maximum width: 0.85 mm; length of elytra: 1.22 mm; length to width: 2.5; elytral length/total length: 0.57; elytral length/width: 1.44. (n = 5). Color, uniform black.

Frons evenly, deeply concave from epistoma to vertex. Central portion shining with sparse punctures associated with short setae. Longer setae present on lateral and dorsal margins, incurved but not obscuring any part of the frons; longest setae equal to width of eye. Area above epistoma with two patches of short, dense setae. Antenna subcircular, with first suture partly septate, second marked externally by a groove. Cirrus absent.

Anterior margin of pronotum slightly elevated with low asperities. Asperities on anterior portion of pronotum low, becoming obsolete at summit. Anterior portion of pronotal disc marked with low, transverse rugae, about the width of the asperities of the anterior slope. Posterior and lateral areas of disc with large punctures, separated by as distance subequal to their width; surface between punctures reticulate.

Elytral disc with strial and interstrial punctures more or less in rows, similar in size, confused near base. Elytra elongate, much longer than pronotum. Declivity abrupt, flattened, with an elevated circumdeclivital ring, about 95% complete, curving anteriorly near suture. Circumdeclivital elevation abruptly marginate, distinctly flattened on face of declivity. Interstriae 1 costate, serrate, not reaching lower margin, slightly divergent. Declivital face minutely reticulate, punctures large, separated by slightly more than their diameters, confused.

Male. Frons evenly convex, antennal club ovate. Similar to female in all other respects.

Type material. Holotype female. Mexico: Veracruz, El Santuario, campus INECOL, 1-IX-2015, bottle trap with ethanol, L.A. Ibarra (CNIN). Allotype male. Same data except different date (CNIN). Paratypes. Same data, different dates 2015–2016 (UTIC,1, IEXA, 1, USNM, 2); Chiapas: Unión Juárez, 15.0817 N, 92.0783 W, 1450 m, 5-XII-2013, F. Infante (UTIC, 1).

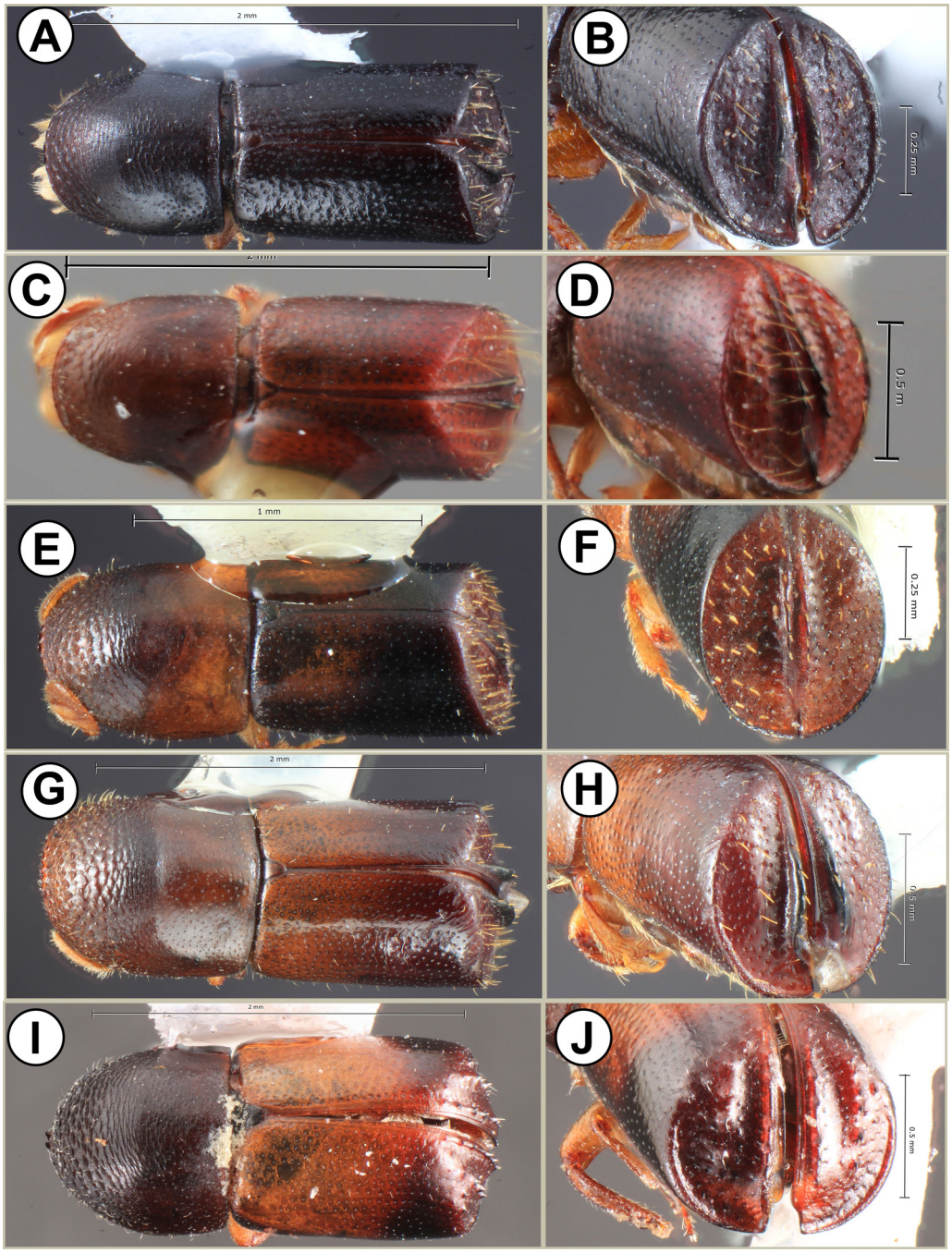

Figure 9. Mexican and Central American species with truncate declivity (1 of 2). **A, B)** *C. ibarrai* new species, holotype. **C, D)** Holotype, *C. serratus* Wood. **E, F)** *C. latisetosus* new species, holotype. **G, H)** *C. burgosi* new species, holotype. **I, J)** *C. mexicanus* Schedl. Photographs A–B, E–J by the author, C–D by S.M. Smith (Copyright National Museum of Natural History, Smithsonian Institution, Washington, D.C., published by permission).

Etymology. The name was chosen to reflect the contributions of Luís Arturo Ibarra J. who was the first to collect this and two other species described in this paper.

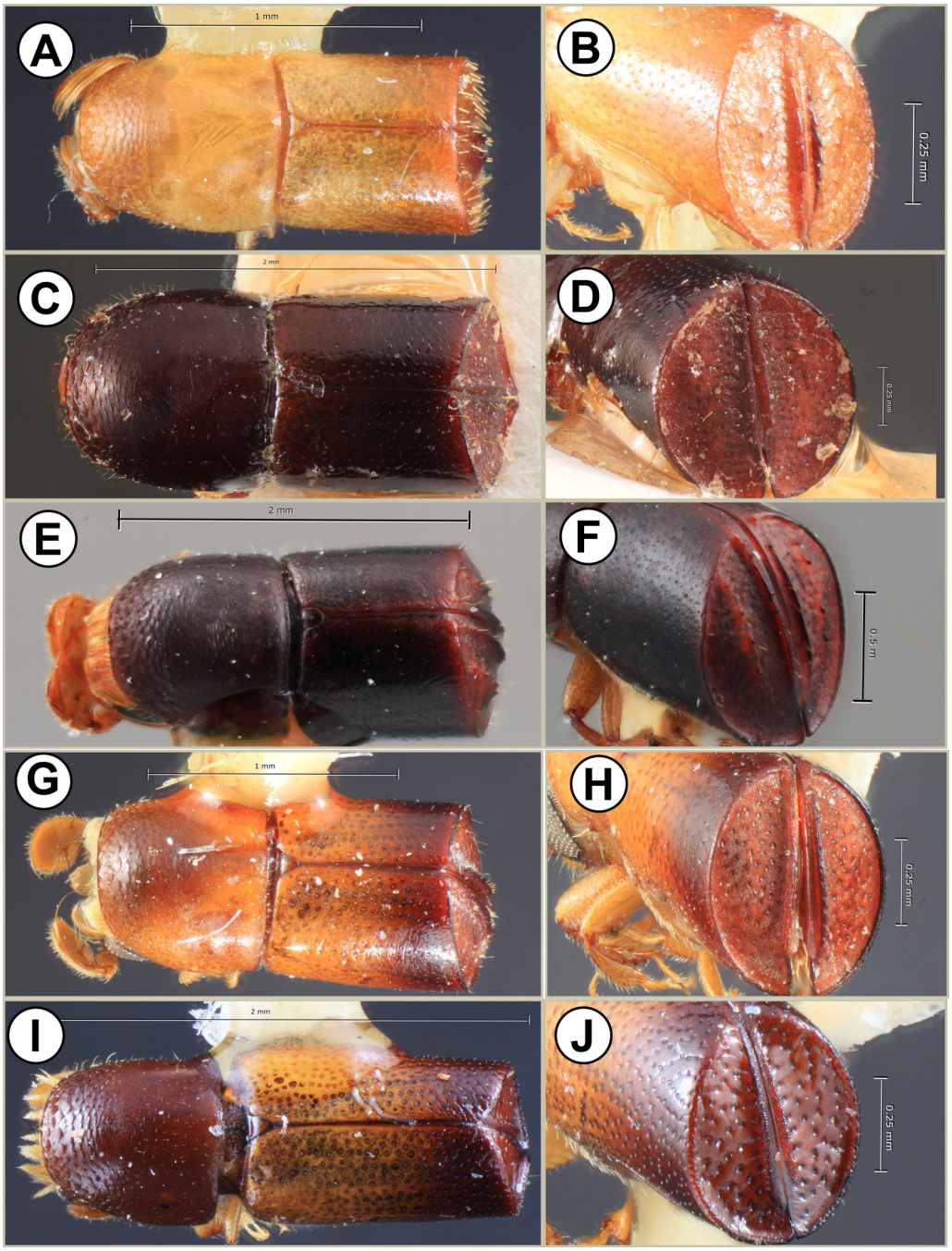

Figure 10. Mexican and Central American species with truncate declivity (2 of 2). **A, B)** *C. praeustus* Schedl. **C, D)** Holotype, *C. eichhoffi* Schedl. **E, F)** Holotype, *C. concisus* Wood. **G, H)** *C. procerus* Bright. **I, J)** *C. petilus* Wood. Photographs A–D, G–J by the author. E–F by S.M. Smith Copyright National Museum of Natural History, Smithsonian Institution, Washington, D.C., published by permission).

Corthylus latisetosus Atkinson, new species

Fig. 9 E, F; Fig. 12 A–D

Diagnosis. This species can be recognized by its small size. The circumdeclivital ring is about 80% complete, with the raised lateral margin not present near the base of the declivity. Unlike several other species (e.g., *C. ibarrai*),

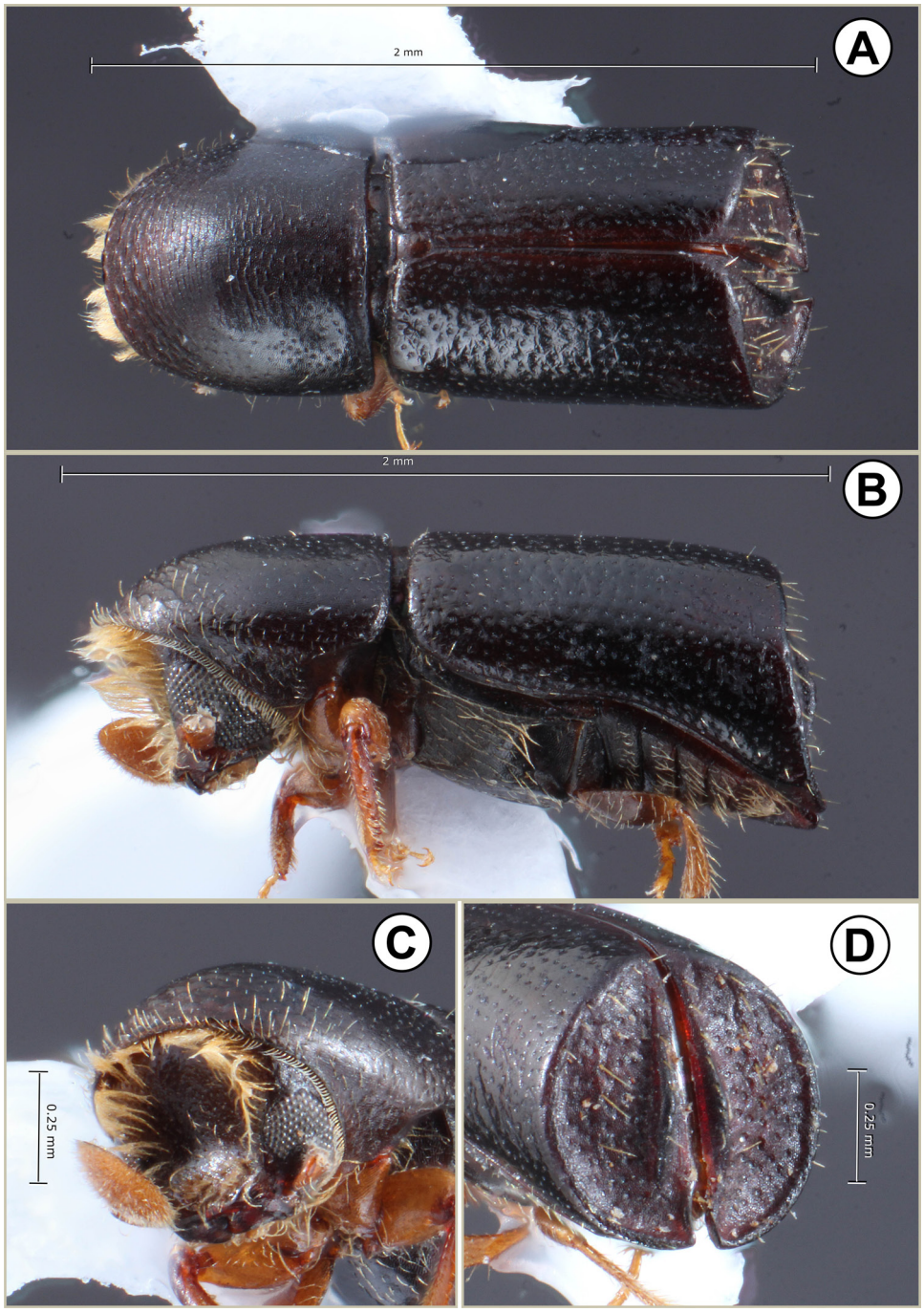

Figure 11. *Corthylus ibarrai*, new species, female holotype. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author.

the face of the declivity is not strongly recessed with respect to the circumdeclivital ring. Most declivital interstriae have rows of stout, truncate setae.

Female. Unknown.

Male. Length: 1.55 mm, maximum width: 0.6 mm; length of elytra: 0.8 mm; length to width: 2.6; elytral length/total length: 0.52; elytral length/width: 1.33. (n = 1).

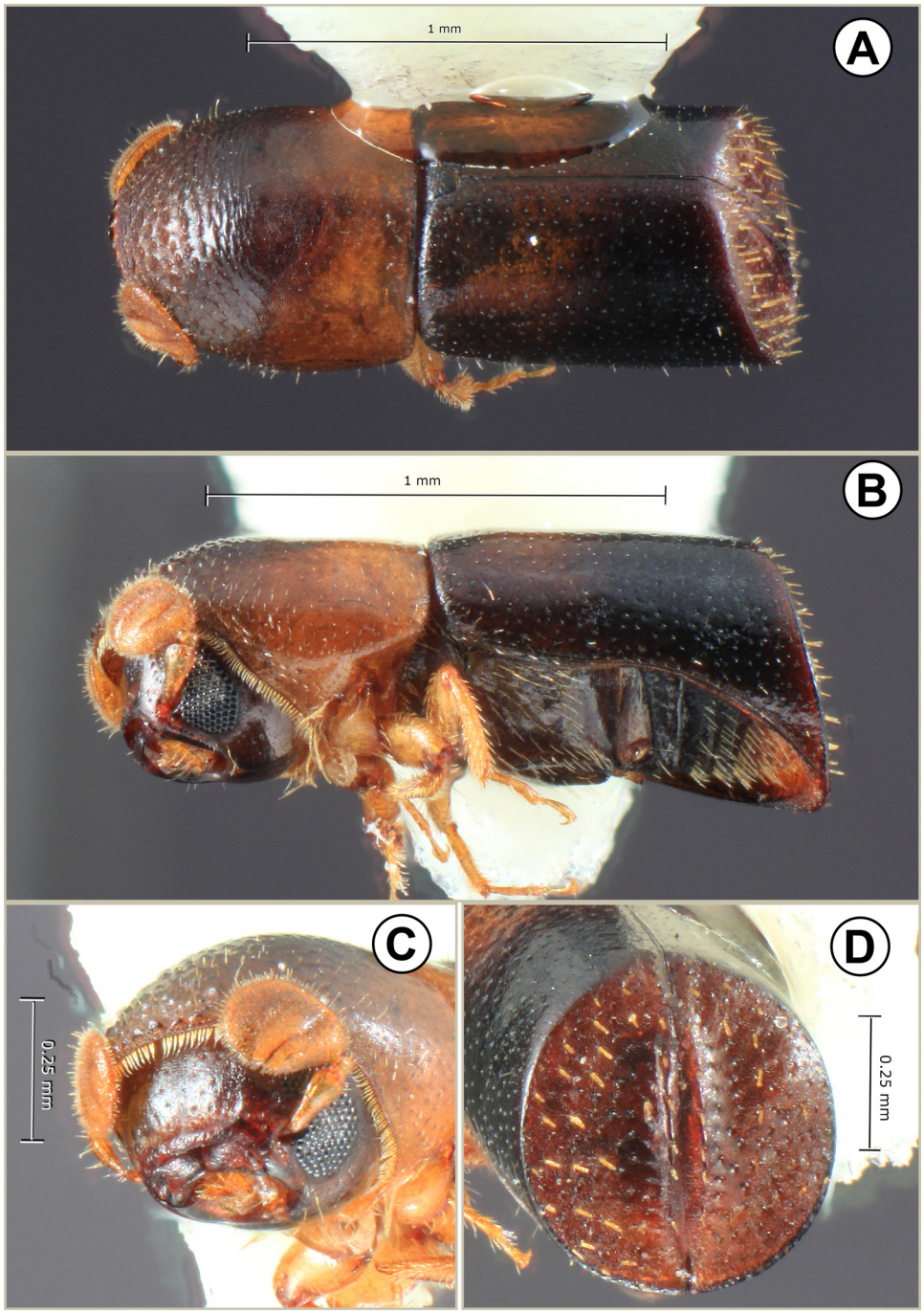

Figure 12. *Corthylus latisetosus*, new species, male holotype. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author.

Frons flattened, shining, without vestiture. Surface finely reticulate, with widely spaced, shallow punctures. Frontal setae absent. Epistomal margin elevated, with a transverse impression immediately above. Antennal club almost oval; suture 1 marked by external groove, partly septate; suture 2 marked by external groove.

Anterior margin of pronotum with low asperities, the central pair largest. Anterior slope with short, weakly elevated asperities. Pronotal summit low, slightly anterior to center. Disc smooth, shining, with widely separated, shallow punctures.

Strial punctures on elytral disc similar in size, slightly confused. Surface smooth, shining, striae not impressed. Some interstrial punctures with short setae in lateral areas. Declivity abruptly truncate with a prominent circumdeclivital elevation from apex, extending 80% of the distance to the declivital base. Face of declivity not impressed with respect to elevated margin. Declivital interstriae 1 weakly elevated, subserrate; elevation not reaching base or apex of declivity. Strial and interstrial punctures similar in size, partly confused. Short, erect, truncate, flattened setae present on most declivital interstriae, their length less than spacing within rows or between rows.

Type material. Holotype male. Mexico: Michoacán: Uruapan, Zumpimito, 19.3336 N, 102. 0592 W, 12-XI-2016; flight intercept trap, M. Lázaro D. (CNIN).

Etymology. The name was chosen because of the wide, truncate interstrial setae on the face of the declivity.

Corthylus burgosi Atkinson, new species

Fig. 9 G, H; Fig. 13 A–D

Diagnosis. This species appears to show characters intermediate between *C. mexicanus* and others in the group with truncate declivities. The circumdeclivital crest only occupies about 70% of the declivital circumference. Its coloration resembles *C. mexicanus*, one of several species that are bicolored with the disc of the pronotum and elytra paler than the anterior and posterior areas. The female frons is similar to that of *C. mexicanus*. It is distinguished from similar species by the very strongly costate elevation on the 1st declivital interstriae which diverges from the sutural margin posteriorly, including *C. mexicanus*.

Female. Length: 2.39 mm, maximum width: 0.95 mm; length of elytra: 1.23 mm; length to width: 2.5; elytral length/total length: 0.51; elytral length/width: 1.29. (n = 4).

Frons deeply concave from epistoma to vertex. A yellow, waxy oval is present adjacent to the epistomal margin to the lower level of the eyes, slightly indented on the posterior margin. Surface of frons finely punctate-granulate, without vestiture in the center. Short, erect setae present on the lateral margins of the concavity from the upper level of the eyes to vertex; these not long enough to curve inwards. Antennal club rounded. Both the first and second antennal sutures are marked by external grooves, the first partially septate. Antennal cirrus absent.

Anterior margin of pronotum truncate, with raised, undulate margin (i.e., asperities confluent). Anterior slope with broad, weakly raised asperities, becoming closely spaced parallel ridges at summit. Summit not strongly raised, anterior to middle. Pronotal disc smooth, shining, paler than anterior slope, with widely spaced, shallow punctures, some of which subtend short, semi-recumbent setae.

Elytral disc paler than posterior areas and declivity. Strial and interstrial punctures similar in size, confused, spaced by about 2× their diameters. Declivity abrupt, almost vertical, with prominently raised margin from apex, 70% of the distance to the base of the declivity. In the lower areas of the declivity the face is markedly depressed below the level of this margin. Interstria 1 with strongly elevated costa, in middle 2/3, beginning posterior top the base of the declivity and not reaching the apex. This costa diverging posteriorly from sutural margin, smoothly curved in lateral profile. Interstriae 2 impressed. Interstriae 3 slightly elevated appearing inflated but not costate, with 3–4 small, rounded granules. All interstrial setae on declivity narrow, apically pointed, spaced within rows by distance less than their lengths; present on costa of interstriae 1, base of interstriae 2, and on interstriae 3–5.

Male. Frons impressed, shallowly concave above epistoma; convex above to epistoma. Surface smooth, with a moderate number of shallow punctures, with sparse micropunctures between them. Antenna smaller than that of female, more symmetrical, sutures 1 and 2 clearly marked externally. Anterior margin of pronotum with a row of low asperities, the middle pair larger than the rest. Identical to females in all other characters of the pronotum, elytra, and declivity.

Type material. Holotype female. Mexico: Michoacán: Uruapan, 2019, light trap, H. Oliviera (CNIN). Allotype. Same data (CNIN): Paratypes. Same data (UTIC, 1 female); Morelos: Huitzilac, Colonia Monte Cristo, 2,207 m, 17-VII-2015, 4-vane flight trap, N. Hernández and A. Burgos (UTIC, 1 male).

Etymology. This species is named after Dr. Armando Burgos Solorio in recognition of his numerous contributions to the knowledge of the Scolytinae and Platypodinae of Mexico. He was also the collector of the first known specimen.

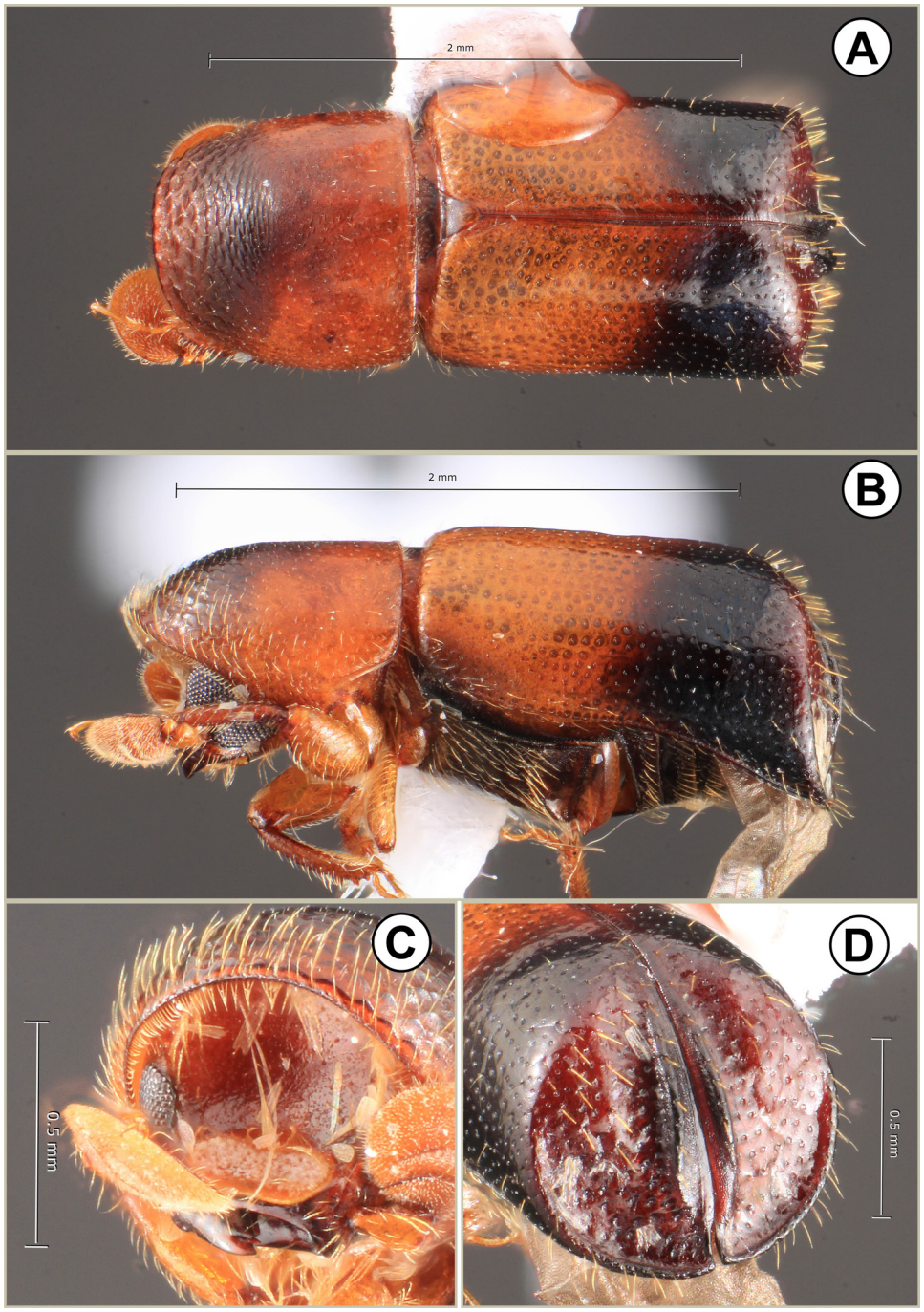

Figure 13. *Corthylus burgosi*, new species, female holotype. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author.

Corthylus granulosus Atkinson, new species

Fig. 14 A–D

Diagnosis. This species would key to couplet 19 in Wood's 1982 key or to couplet 32 depending on how the small postero-lateral margin of the declivity in interpreted. In either case the key would fail beyond that point. It most closely resembles species that would key out to couplet 6, but would not go further. It would key to couplet 37 in his 2007 key but would not match either alternative. Distinctive characters include the evenly convex declivity

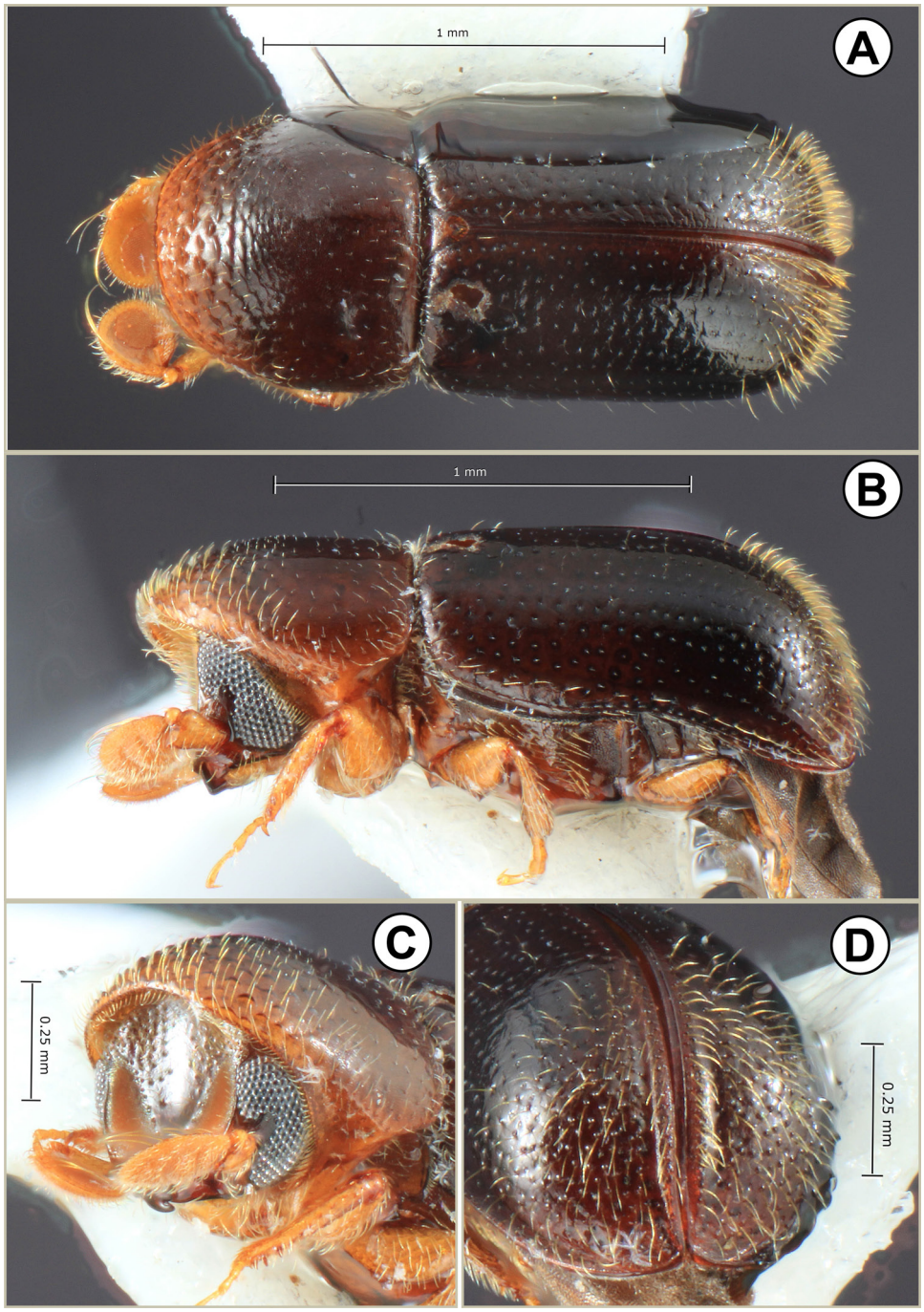

Figure 14. *Corthylus granulosus*, new species, female holotype. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author

with abundant granules and setae on the entire declivital face. The female frons is unusual in having two separate, elongate, yellow waxy or finely pilose areas.

Female. Length: 1.87 mm, maximum width: 0.75 mm; length of elytra: 1.1 mm; length to width: 2.5; elytral length/total length: 0.59; elytral length/width: 1.47. (n = 1).

Frons shallowly concave from epistoma to vertex; lateral areas with yellowish, finely pilose or waxy appearance on either side to slightly above upper level of eyes. Center of frons from epistoma to vertex impunctate,

shining; lateral areas, especially above deeply, closely punctured. Short, sparse setae on upper lateral margins of frontal concavity. Antenna rounded, asymmetrical. Sutures 1 and 2 marked externally by distinct grooves; suture 1 appears aseptate in the unique type.

Anterior margin of pronotum rounded, unarmed. Anterior slope with flattened asperities to summit, Disc smooth, shining, with widely spaced, shallow punctures, most with a short recumbent seta.

Elytral disc smooth, shining. Strial and interstrial punctures similar in size, confused near base, mostly without associated setae.

Declivity convex in lateral profile. A distinct, short ridge on postero-lateral margin from apex to about interstria 7. All striae and interstriae confused on face of declivity. Punctures replaced with small rounded granules, each associated with a fine, curved, acuminate seta. Interstriae 2 slightly impressed, interstriae 3 not elevated.

Male. Unknown.

Type material. Holotype female. Mexico: Chiapas: Chiquihuites, 15.0936 N, 92.0994 W, 1,990 m, 5-11-V-2013, F. Infante (CNIN).

Etymology. The name reflects the abundant granules over the entire surface of the declivity.

Corthylus microcorthyloides Atkinson, new species

Fig. 15

Diagnosis. This unusual species at first glance appears to be a species of *Microcorthylus*, especially because of its slender profile and the sulcate elytral declivity and small acute granules on interstriae 3. It differs from known species of that genus because the base of the pronotum has a fine raised lateral line. In most, possibly all species of *Microcorthylus*, the apices of the elytra are curved upwards and in direct posterior view the lower margin of the declivity is "v" shaped. In this species the apices are not upturned and the lower margin of the declivity forms a continuous curve. It could arguably be placed in that genus after revision of the character states that distinguish it from *Corthylus*. I have compared it to known species of *Microcorthylus* but it matches none of them. It would key to couplet 34 in Wood's 1982 key to *Corthylus*, 53 in the 2007 key. In general appearance it most closely resembles *C. convexifrons* Wood.

Female. Length: 1.6 mm, maximum width: 0.9 mm; length of elytra: 0.75 mm; length to width: 2.1; elytral length/total length: 0.56; elytral length/width: 1.20. (n = 1). Color yellowish brown, slightly darker on declivity.

Frons shining, flattened between eyes, weakly concave above epistoma to upper level of eyes; impunctate, without setae. A very faint longitudinal carina at upper level of eyes. Facets of compound eyes coarse, large in proportion to body size. Antennal club roughly oval, slightly asymmetrical. Short, erect, abundant setae distributed along entire perimeter of club, but not developed into a cirrus. Two straight sutures marked externally by shallow grooves, apparently not septate.

Anterior margin of pronotum unarmed. Anterior slope with rows of flattened asperities to summit. Disc smooth, shining, impunctate.

Elytra with discal striae and interstriae indistinct and confused at base, more distinct posteriorly with shallow punctures. Declivity abrupt in lateral profile, apex of elytra curved downwards. Interstriae 1 raised in a low costa; interstriae 2 impressed, impunctate. Interstriae 3 raised above level of 1 and 2, with 3 pointed denticles, each associated with a fine seta. Sparse, short setae also present on other posterolateral interstriae. Apical margin with a low, raised ridge, diverging from costal margin to about interstriae 7.

Male. Unknown.

Type material. Holotype: Mexico: Jalisco, Mascota, El Atajo, G.A. Quíroz R. and B.E. Díaz M., 2–31-X-2004, pitfall trap (NTP trap) (CNIN).

Etymology. The specific name refers to the overall appearance which resembles a species of *Microcorthylus.*

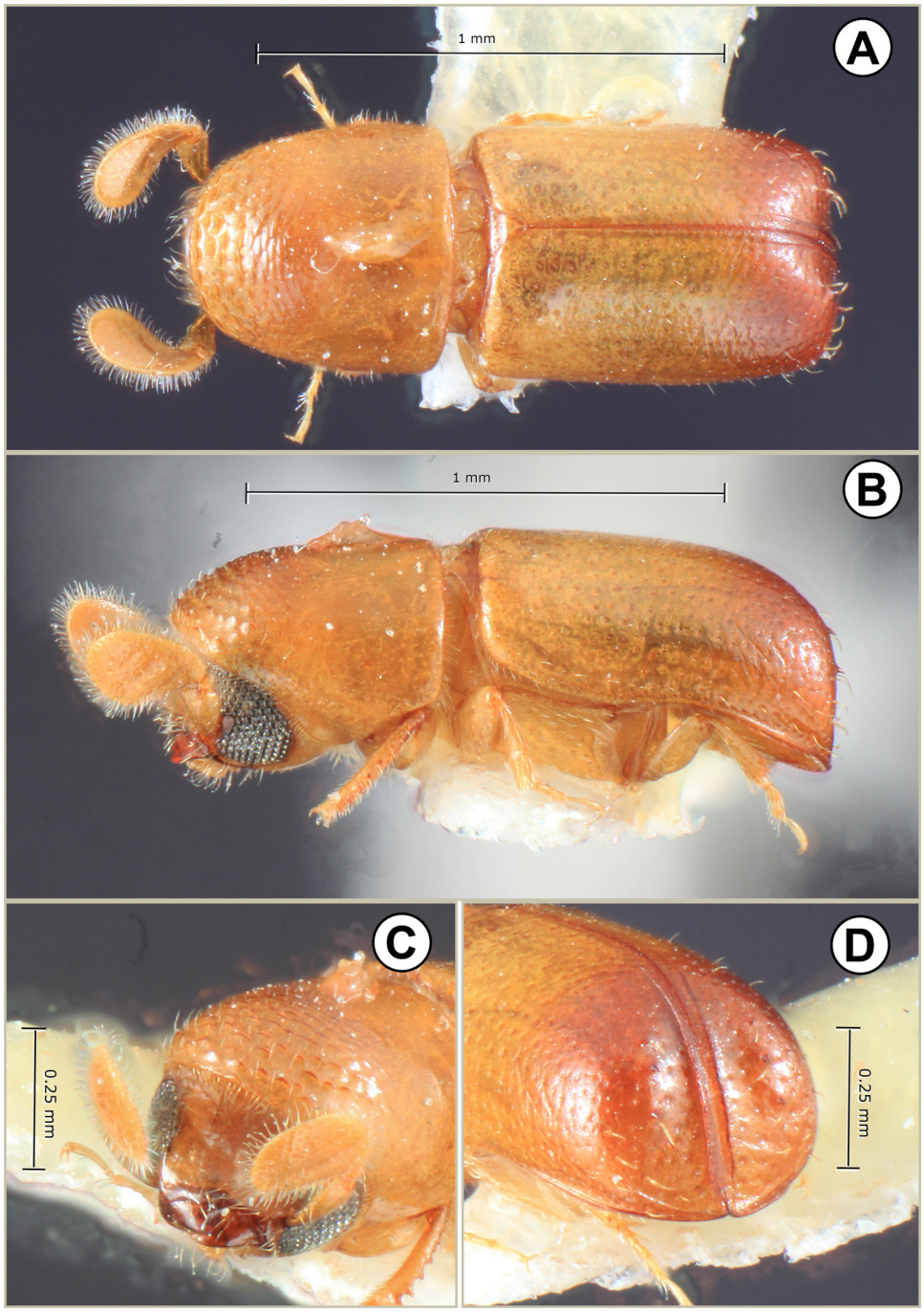

Figure 15. *Corthylus microcorthyloides*, new species, female holotype. **A)** Dorsal habitus. **B)** Lateral habitus. **C)** Frons and antenna. **D)** Declivity. All photographs by the author.

New Records

Unless otherwise indicated, all are new state records.

***Corthylus consimilis* Wood. Chiapas:** Chiquihuites, 15.0933 N, 92.0925 W, 1,550 m, 5-11-V-2013, flight intercept trap with ethanol and methanol, F. Infante (UTIC, 8; FSCA, 5); **Oaxaca:** Comaltepec, 17.5962 N, 96.4756 W, 2,213 m, 16-VIII-2014, in cut branches, 2–15 cm in diameter, T.H. Atkinson and A. Burgos (UTIC, 7); La

Esperanza, 17.6278 N, 96.3641 W, 1,616 m, 17-VIII-2014, 4 vane trap with ethanol, T.H. Atkinson and A. Burgos (UTIC, 6, CEAM, 5, TAMU, 4). Previously known from Puebla and Veracruz to Guatemala.

***Corthyus flagellifer* Blandford. Hidalgo:** Cerro Boludo, 23 km S. Tamazunchale, 251 m, 6-IV-1987, R.H. Turnbow (RHTC, 1); **Oaxaca:** Lachatao, 17.2592 N, 96.4425 W, 2,042 m, 15-VIII-2014, cut branch *Pistacia* sp. (Anacardiaceae), T.H. Atkinson and A. Burgos (UTIC, 4). Widely distributed in Lowland Mexico to Panama.

***Corthylus fuscus* Blandford. Hidalgo:** Tlanchinol, 2.7 mi N on Hwy. 105, 1,524 m, 15-VI-1983, from branch pear (*Pyrus*, Rosaceae), C.W. O'Brien, L. O'Brien, and G.B. Marshall (FSCA, 1). This species in known from the highlands of central Mexico to Guatemala.

***Corthyus minutissimus* Schedl. Chiapas:** Chiquihuites, 15.0882 N, 92.0894 W, 1,450 m, 5-11-XII-2013, flight intercept trap with ethanol and methanol, F. Infante, (UTIC, 1). Previously known from Oaxaca to Honduras.

***Corthylus nolenae* Wood. Oaxaca:** San Baltazar Guelva, 16.7860 N, 96.3289 N, 19-X-2011, from dry bloom stalk *Hechtia* sp. (Bromeliacae), T.H. Atkinson (UTIC, 6, FSCA 8, CEAM, 8). This species was described from Oaxaca, in bloom stalks of *Nolina* sp. (Agavaceae), an unrelated monocot.

***Corthylus nudus* Schedl. Hidalgo:** Tlanchinol, 2.7 mi N on Hwy. 105, 1,524 m, 9-V-1983, C.W. O'Brien, L. O'Brien, and G.B. Marshall (FSCA, 1). Known from elsewhere in the highlands of central Mexico.

***Corthylus petilus* Wood. Michoacán:** Tingambato, 26-II-2016, R. Campos and J. Bravo (UTIC, 1). This species was described from Durango and has been found as far north as southern Arizona along the western mountains.

Acknowledgments

Field work by Luís Ibarra and Hamilton Oliveira, Instituto de Ecología, Xalapa, Veracruz which resulted in the discovery of several new species and travel to Mexico by the author were supported by a grant (no. 292399) from the Fondo Nacional de Desarrollo Científico y Tecnológico or FORDECYT (National Fund for Scientific and Technological Development). I thank Andrew J. Johnson and Roger A. Beaver for their careful reviews of this manuscript.

Literature Cited

Blandford WFH. 1904. Scolytidae (in part). Biologia Centrali Americana 4(6): 225–280.

Bright DE. 1972. New species of Scolytidae (Coleoptera) from Mexico, with additional notes. I. Tribes Xyleborini and Corthylini. Canadian Entomologist 104(10): 1369–1385.

Schedl KE 1961. New species of bark- and timber beetles from the neotropical region. 186 Contribution. Pan-Pacific Entomologist 37(4): 223–233.

Wood SL. 1974. New synonymy and records of American bark beetles (Coleoptera: Scolytidae). Great Basin Naturalist 34(4): 277–290.

Wood SL. 1982. The bark and ambrosia beetles of North and Central America (Coleoptera: Scolytidae), a taxonomic monograph. Great Basin Naturalist Memoirs 6: 1–1356.

Wood SL. 1986. New synonymy and new species of American bark beetles (Coleoptera: Scolytidae), Part XI. Great Basin Naturalist 46(2): 265–273.

Wood SL. 2007. Bark and ambrosia beetles of South America (Coleoptera: Scolytidae). Monte L. Bean Science Museum; Provo, Utah. 900 p.

Wood SL, Bright DE. 1992. A catalog of Scolytidae and Platypodidae (Coleoptera), Part 2. Taxonomic index. Great Basin Naturalist Memoirs 13: 1–1553.

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Review editor Oliver Keller.

Appendix 1. Label data for specimens in figures. All photographs for a given species are from a single individual, unless otherwise indicated.

***Corthylus burgosi* Atkinson** (Fig. 9 G–H, 13). Female holotype, Mexico: Michoacán: Uruapan, 2019, light trap, H. Oliviera (CNIN).

***Corthylus concisus* Wood** (Fig. 10 E–F). Female holotype, Costa Rica: Cartago, 17-VIII-1963, S.L. Wood (USNM).

***Corthylus cristatus* Atkinson** (Fig. 4 A–B, 5). Female holotype, Mexico: Veracruz, El Santuario, campus INECOL, 28-III-2016, bottle trap with ethanol, L.A. Ibarra and A. Gil V. (CNIN).

***Corthylus cristatulus* Atkinson** (Fig. 4 C–D, 6). Female holotype, Mexico: Veracruz, El Santuario, campus INECOL, 15-III-2015, bottle trap with ethanol, L.A. Ibarra (CNIN).

***Corthylus eichhoffi* Schedl** (Fig. 10 C–D). Female holotype, Costa Rica: Limón: Santa Clara, 12-IV-1924, F. Nevermann (NMW).

***Corthylus granulocristatus* Atkinson** (Fig. 4 E–F, 7). Female holotype, Mexico: Chiapas, 11 km NE San Cristobal, Hwy. 199, 2438 m, 28-V-1987, black light plus mercury vapor, D.A. Rider and E.G. Riley (USNM).

***Corthylus granulosus* Atkinson** (Fig. 14). Female holotype, Mexico: Chiapas: Chiquihuites, 15.0936 N, 92.0994 W, 1,990 m, 5–11-V-2013, F. Infante (CNIN).

***Corthylus ibarrai* Atkinson** (Fig. 9 A–B, 11). Holotype female, Mexico: Veracruz, El Santuario, campus INECOL, 1-IX-2015, bottle trap with ethanol, L.A. Ibarra (CNIN).

***Corthylus latisetosus* Atkinson** (Fig. 9 E–F, 12). Male holotype, Mexico: Michoacán: Uruapan, Zumpimito, 19.3336 N, 102. 0592 W, 12-XI-2016. flight intercept trap, M. Lázaro D. (CNIN).

***Corthylus mexicanus* Schedl** (Fig. 9 I–J). Male, Mexico: Puebla: La Soledad Tetela, 19.4384 N, 97.4859 W, 1786 m, 24-V-2018 (UTIC).

***Corthylus microcorthyloides* Atkinson** (Fig. 15). Holotype (sex?), Mexico: Jalisco: Mascota, El Atajo, G.A. Quíroz R. and B.E. Díaz M., 2–31-X-2004, pitfall trap (NTP trap) (CNIN).

***Corthylus parvulus* Blandford** (Fig. 1 A–D). Male, Mexico: Jalisco: El Tuito, 640 m, 29-V-1982, T.H. Atkinson & A. Equihua M., S-712 (TAMU). (Fig. 1 B–C). Female. Same data as male.

***Corthylus petilus* Wood** (Fig. 10 I–J). Female, U.S.: Arizona: Pima Co., Mt. Bigelow, 2316 m, 11-VI-1969, ex *Quercus hypoleucoides* (Fagaceae), S.L. Wood (USNM).

***Corthylus poblanus* Atkinson** (Fig. 4 G–H, 8). Male holotype, Mexico: Puebla, Mpio. Tetela de Ocampo, Huerto Don Lucas, 19.5313 N, 97.4834 W, 10-V-2018, 1,701 m, (CNIN).

***Corthylus praeustus* Schedl** (Fig. 10 A–B). Female, Costa Rica: Heredia: La Selva Biol. Sta., 3 km S Pto. Viejo, 10.4333 N, 84.0167 W, 10-IV-1984, ex *Pentaclethra macroloba* (Leguminosae), H. A. Hespenheide (USNM).

***Corthylus procerus* Bright** (Fig. 10 G–H). Female, Panamá: Chiriquí: 8 mi S El Hato del Volcán, 1000m, 7-I-1964, S.L. Wood (USNM).

***Corthylus senticosus* Wood** (Fig. 3 G–H). Female holotype, Mexico: Veracruz: Xalapa, 1360 m, 23-X-1983, ex *Psittacanthus schiedeanus* (Loranthaceae), F. A. Noguera M., FANM-77 (USNM).

***Corthylus serratus* Wood** (Fig. 9 C–D). Female holotype, Costa Rica: Cartago, Tapantí, 1300 m, 7-II-1963, ex *Miconia* sp. (Melastomataceae), S.L. Wood (USNM).

***Corthylus spinipennis* Wood** (Fig. 3 E–F). Female holotype, Costa Rica: Puntarenas: Estación de Biología las Alturas, III-1992, malaise trap (USNM).

***Corthylus spinosulus* Atkinson** (Fig 2, 3 A–B). Female holotype, Mexico: Chiapas, Chiquihuites, 15.09 N, 92.0798 W, 1,700 m, 5–11-V-2013, flight intercept trap with ethanol and methanol, F. Infante (CNIN).

***Corthylus spinosus* Wood** (Fig. 3 C–D). Female holotype, Mexico: Veracruz: Fortin de las Flores, 27–IV-1985, black light trap, H.V. Weems (USNM).