

NEW SPECIES OF AMERICAN CORTHYLINI (COLEOPTERA: SCOLYTIDAE)¹

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ABSTRACT.— The following species are described as new to science: *Monarthrum corditicum*, *M. tetradontium*, *M. conversum*, *M. bidentatum* (Mexico), *M. subgranulatum* (Honduras), *M. morsum*, *M. carinatum*, *M. adustum*, *M. insignatum*, *M. fastigiorum*, *M. limulum*, *M. carinulum*, *M. infradentatum*, *M. corculum*, *M. posticum*, *M. proximum* (Costa Rica), *M. proprium*, *M. notatum* (Costa Rica, Panama), *M. bifoveatum* (Costa Rica, Venezuela), *Corthycyclon caliginis*, *C. furvus*, *C. morulus* (Costa Rica), *C. tardus* (Costa Rica, Panama), *Corthylocurus debilis* (Costa Rica, Panama).

The 24 species of ambrosia beetles described below as new to science were discovered during the preparation of my monograph of the Scolytidae of North and Central America. They are named here in order to avoid nomenclatural confusion and to facilitate identification in the interim before publication of the monograph. The species treated below are in the tribe Corthylini and represent the genera *Monarthrum* (19), *Corthycyclon* (4), and *Corthylocurus* (1). As indicated in the above abstract, they are from the following countries: Mexico (4), Honduras (1), Costa Rica (13), Costa Rica and Panama (4), Costa Rica and Venezuela (1).

Monarthrum corditicum, n. sp.

This species is distinguished from *cordatum* (Blandford) in the male by the more gradual elytral declivity, by the less strongly, less abruptly elevated lateral margin of the declivity, and by the larger, acutely pointed declivital spine 1 and smaller spine 2. The female is indistinguishable from *cordatum*.

Male.— Length 2.3 mm (paratypes 2.0-2.4 mm), 3.1 times as long as wide; color yellowish brown, except anterior half of pronotum and elytral declivity dark brown.

Frons and pronotum as in *bispinum* (Blandford).

Elytra 1.8 times as long as wide, 1.4 times as long as pronotum; sides straight and parallel almost to apex, then broadly rounded, rather deeply, subacutely emarginate on median third behind; surface subreticulate, except almost smooth near declivity, punctures obscure. Declivity steep; concavely truncate; margin abrupt; spine 1 almost at suture, rather small, sharply pointed, 2 in line with striae 3, twice as long as 1, pointed, curved very slightly mesad, lateral margin from spine 2 to suture subacute, rather strongly elevated, descending gradually on its inner margin; rather deeply, subacutely emarginate at suture; excavated area rugose-reticulate, rather numerous, confused punctures on median third, a conical

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spine just below middle in line with discal interstriae 3, this denticle about as large as spine 1. Subglabrous.

Female.— Similar to male, except posterior face of antennal club without long hair; anterior margin of pronotum feebly serrate; declivity flat on lower half, more nearly convex and shallowly sulcate from suture to interstriae 2 above, small, pointed denticles on interstriae 3 at base and also slightly above middle.

Type Locality.— Thirty km or 19 miles E Tulancingo, Hidalgo, Mexico.

Type Material.— The male holotype, female allotype, and 20 paratypes were collected at the type locality on 12-VI-67, at 2300 m, No. 15, from a *Quercus* log, by me.

The holotype, allotype, and paratypes are in my collection.

Monarthrum proprium, n. sp.

This species is distinguished from *dimidiatum* (Ferrari) by the smaller size, by the smoother, more brightly shining frons, by the more narrowly oval antennal club, and by the shorter, less strongly explanate elytral declivity.

Male.— Length 1.9 mm (paratypes 1.6-2.1 mm), 3.2 times as long as wide; color yellowish brown to dark reddish brown.

Frons convex, lower area, sides and vertex rugose-reticulate, large central area smooth, shining, punctures rather coarse, close; vestiture sparse, inconspicuous. Antennal club oval, 1.3 times as long as wide, sutures feebly procurved.

Pronotum 1.4 times as long as wide; sides almost straight and parallel on basal two-thirds, rather broadly rounded in front; anterior margin armed by about 10 serrations; summit on anterior third; anterior slope very steep, rather finely asperate; posterior areas reticulate, punctures minute. Glabrous.

Elytra 1.8 times as long as wide, 1.4 times as long as pronotum; sides almost straight and parallel on basal half, very slightly converging to level of sutural apex, then broadly rounded, rather deeply, obtusely emarginate on median fourth behind; surface reticulate, punctures obscure. Declivity rather steep, rather shallowly, broadly concave; margins rounded except acute near apex and at margins of emargination; lateral margins with spine 1 one-third and spine 2 two-thirds of declivital length from base, both on inner margin of lateral margin, each moderately small, conical, pointed, subequal in size; excavated area rugose-reticulate, except smooth and shining on median third, punctures on shining area small, sparse. Subglabrous.

Female.— Similar to male except antennal club 1.0 times as long as wide, ornamented on posterior face by long hair; anterior margin of pronotum more finely serrate; elytral declivity slightly less strongly impressed, spines smaller.

Type Locality.— Cerro Punta, Chiriqui, Panama.

Type Material.— The male holotype, female allotype, and 10 paratypes were taken at the type locality (labeled Volcan Chiriqui) on 11-I-64, 1800 m, Nos. 371, 398 (type), in a tree limb, No. 404, Inga, by me. Three paratypes were taken 15 km SE Cartago, Cartago, Costa Rica, 24-IX-63, 1800 m, No. 249, tree bole, S. L. Wood; one paratype bears identical data except No. 17B from *Conostegia oerstediana*.

The holotype, allotype, and paratypes are in my collection.

Monarthrum bifoveatum, n. sp.

The male of this species is rather similar to *proprium* Wood except for the frons which is as in *dentigerum* (LeConte); the female frons is radically different and suggests a relationship to *fimbriacorne* (Blandford).

Male (allotype).— Length of paratypes 1.8-2.0 mm, 3.0 times as long as wide; color light brown, anterior half of pronotum and posterior third of declivity often darker.

Frons about as in *dentigerum* except reticulation and punctures finer. Pronotum, elytral outline, and sculpture of elytral disc about as in *dentigerum* except elytral disc entirely reticulate, punctures much finer, rather obscure. Elytral declivity very similar to *proprium* except much less strongly explanate, emargination at suture much narrower, not as deep, floor of excavated area slightly wider.

Female (holotype).— Length 1.9 mm; similar to male except frons divided into thirds by two shallow, parallel grooves from epistomal margin to upper level of eyes, each groove with a row of short, stout bristles, median third smooth, shining, lateral thirds mostly reticulate, with lower area at inner margin of eye rather strongly, subfoveately impressed; a few setae along epistomal margin; posterior face of antennal club ornamented by long hair; anterior margin of pronotum unarmed; elytral declivity less strongly impressed, much as in female *proprium*.

Type Locality.— San José, San José, Costa Rica.

Type Material.— The female holotype and two paratypes were taken at the type locality on 12-XI-63, 1300 m, No. 187, from a tree limb, by me; the male allotype and seven paratypes should bear identical data except they were erroneously dated 22-X-63. Six paratypes are from Escasu, San José, Costa Rica, 2-X-63, 1300 m, No. 216, *Spondias purpurea*, S. L. Wood; 26 paratypes are from El Laurel experiment station, 12 km SW Caracas, Venezuela, 1-V-70, 1300 m, No. 474, tree bole, S. L. Wood.

The holotype, allotype, and paratypes are in my collection.

Monarthrum tetradontium, n. sp.

This species is distinguished from *exornatum* (Schedl) by the smoother, much more deeply punctured elytral disc and by the larger, much stouter declivital spines.

Male.— Length 2.4 mm, 3.3 times as long as wide; color dark brown, basal half of elytra slightly lighter.

Frons convex, reticulate, becoming rugose-reticulate toward epistoma, punctures moderately coarse, close; vestiture inconspicuous.

Pronotum 1.4 times as long as wide; sides straight and parallel on basal two-thirds, broadly rounded in front; anterior margin subserate; otherwise as in *scutellare* (LeConte).

Elytra 1.9 times as long as wide, 1.3 times as long as pronotum; sides straight and parallel on basal half, distinctly tapered on posterior half, rather narrowly rounded behind, deeply emarginate on median sixth; surface almost smooth, obscurely reticulate in some areas, punctures rather small, moderately deep, confused except stria and interstria punctures almost in rows near declivity. Declivity rather steep, flattened, lateral margins rounded, not elevated, apex moderately explanate; interstriae 2 (actually displaced interstriae 3) armed one-third and two-thirds distance from base by spines; spine 1 conical, pointed, about as high as its basal width; spine 2 slightly higher, very stout, blunt; surface near base of spine 2 rugose-reticulate, remaining area almost smooth and deeply punctured. Vestiture sparse, confined to declivity.

Type Locality.— Mt. Colima, Jalisco, Mexico.

Type Material.— The male holotype was taken at the type locality on 2-XII-48.

The holotype is in my collection.

Monarthrum conversum, n. sp.

This species is distinguished from *exornatum* (Schedl) by the larger, stouter size and by the very different elytral declivity.

Male.— Length 3.6 mm (paratypes 3.1-3.6), 3.0 times as long as wide; color very dark reddish brown, basal half of pronotum lighter.

Frons essentially as in *exornatum*, except upper areas almost smooth and with minute, impressed points.

Pronotum 1.3 times as long as wide; sides straight and parallel on basal half, rather narrowly rounded in front; anterior margin armed by about 10 coarse serrations; about as in *scutellare* (LeConte), except punctures on posterior areas slightly larger, those near base of disc transversely elongate. Glabrous.

Elytra 1.5 times as long as wide, 1.2 times as long as pronotum; outline about as *exornatum* except stouter; surface shining, with rather numerous fine, irregular lines, numerous impressed points, punctures rather small, moderately deep, confused. Declivity steep, broadly, concavely excavated; lateral margins moderately elevated, rounded except on apical fifth of declivital length; spine 1 on interstriae 3 at basal margin, as high as its basal width, subconical; spine 2 two-thirds declivital length from base, displaced less than its basal width from margin, subcylindrical, very slightly longer than its basal width, its apex subtruncate, its dorsal angle subacute; excavated area mostly shining, with numerous minute, impressed points,

punctures moderately coarse, rather deep, lateral areas near margins rugose-reticulate. Subglabrous.

Female.— Similar to male except antennal scape with fine, short hair; anterior margin of pronotum obscurely serrate; elytral disc reticulate, punctures somewhat obscure; declivity mostly broadly convex, moderately sulcate on upper half, subconcave below; spine 1 much smaller; spine 2 at middle of declivity midway between lateral margin and suture, similar to spine 1 in size and shape; declivital surface rugose-reticulate, punctures small, obscure.

Type Locality.— Four miles or 6 km W Tepic, Nayarit, Mexico.

Type Material.— The male holotype and female allotype were taken at the type locality on 13-VII-65, 1000 m, No. 240, from a tree limb, by me. One paratype is from Volcan Colima, Jalisco, 23-VI-65, 2500 m, in flight, S. L. Wood.

The holotype, allotype, and paratype are in my collection.

Monarthrum morsum, n. sp.

This species is distinguished from *exornatum* (Schedl) by the smaller size, and by the steeper, narrower elytral declivity with different sculpture and arrangement of the spines.

Male.— Length 1.5 mm, 2.8 times as long as wide; color yellowish brown, posterior half of elytra darker.

Frons and pronotum as in *exornatum*, except pronotum 1.15 times as long as wide.

Elytra 1.5 times as long as wide, 1.3 times as long as pronotum; outline as in *conversum* Wood, except more strongly tapered on posterior third; disc obscurely reticulate on basal third, smooth and shining elsewhere, numerous impressed points present, punctures fine, distinct, in striae rows on posterior half. Declivity moderately steep, rather broadly, strongly sulcate; spine 1 on interstriae 2 near base, rather small, pointed, its upper margin feebly subcostate; spine 2 small, conical, two-thirds declivital length from base, displaced from lateral margin one-third distance toward suture; feebly explanate below; surface of impressed area shining, numerous impressed points present, punctures evident only near suture. Vestiture confined to declivity, of short moderately abundant hair.

Type Locality.— Pandora, Limon, Costa Rica.

Type Material.— The male holotype was taken at the type locality on 23-VIII-63, 50 m, No. 135, from a limb 8 cm in diameter, by me.

The holotype is in my collection.

Monarthrum carinatum, n. sp.

This species is distinguished from *exornatum* (Schedl) by the larger size, by the fine, median, frontal carina, and by the steeper, more strongly impressed, more weakly explanate elytral declivity.

Male.— Length 2.7 mm (paratypes 2.5-2.8 mm), 3.0 times as long as wide; color dark brown.

Frons convex, a fine, acute, low carina from epistoma almost to upper level of eyes; surface on lower half etched by minute, sub-aciculate lines, more nearly smooth and shining above, punctures fine but superficially appearing large, indistinct, obscurely sub-aciculate; obscure vestiture confined to epistomal margin. Antennal club broadly oval, 1.3 times as long as wide.

Pronotum 1.3 times as long as wide, about as in *exornatum*, except anterior margin rather coarsely serrate.

Elytra 2.0 times as long as wide, 1.5 times as long as pronotum; outline more broadly rounded behind than *exornatum*; disc as in *exornatum*, declivity steeper, more deeply, more broadly impressed; spines 1 and 2 small, conical, pointed, 1 one-third declivital length from base, on rounded margin, 2 two-thirds declivital length from base, slightly mesad of margin; surface of impressed area finely rugose-reticulate, except almost smooth and very finely punctured near suture on lower half; apical margin acute, weakly explanate. A few setae on or near margins of declivity.

Female.— Similar to male except frontal carina longer; posterior face of antennal club ornamented by longer hair; elytral declivity less strongly impressed, denticles slightly smaller.

Type Locality.— Cerro de la Muerte, San José, Costa Rica.

Type Material.—The male holotype, female allotype, and 12 male paratypes were taken at the type locality on 6-VIII-63, 2600 m, No. 113, 30 cm bole of Melastomaceae(?) tree, by me.

The holotype, allotype, and paratypes are in my collection.

Monarthrum adustum, n. sp.

This species is distinguished from *punctifrons* (Blandford) by the larger size and by the very different elytral declivity in both sexes.

Male.— Length 3.1 mm (paratypes 2.8-3.4 mm), 3.1 times as long as wide; color dark brown, bases of pronotum and elytra often of lighter color.

Frons, pronotum, and elytral disc as in *punctifrons*. Elytral declivity similar to *punctifrons* but must more narrowly impressed, deeply sulcate on basal half; tubercle at base on interstriae 1 almost obsolete; spines 1 and 2 subequal in size, small, conical, 2 at middle of declivity; surface reticulate. Vestiture largely confined to declivity, of short, moderately abundant hair.

Female.— Similar to male, except posterior face of antennal club ornamented by long hair; anterior margin of pronotum weakly serrate; elytral declivity less strongly, more narrowly impressed; space between members of first pair of denticles equal to distance between members of second pair.

Type Locality.— Cerro de la Muerte, San José, Costa Rica.

Type Material.— The male holotype and 29 paratypes were taken at the type locality on 6-VIII-63, 2800 m, No. 110, *Quercus costaricensis*, by me; the allotype and 19 paratypes bear identical data except 1-VIII-66, Nos. 44 and 45, *Quercus*. Ten paratypes are from Volcan Irazu, Cartago, Costa Rica, 13-VII-63, 2300 m, No. 4, *Quercus*, S. L. Wood; and five paratypes are from Volcan Poas, Heredia, Costa Rica, 19-VII-66, 2600 m, No. 4, *Quercus*, S. L. Wood.

The holotype, allotype, and paratypes are in my collection.

Monarthrum insignatum, n. sp.

This species is distinguished from *hoegi* (Blandford) by having the median third of the elytral declivity smooth, with numerous minute, impressed points, and by the minute features of the frons as described below.

Male (allotype).— Length 2.4-2.6 mm, 2.9 times as long as wide; color dark brown.

Frons as in *hoegi*, except punctures slightly coarser, deeper, median carina slightly sharper. Pronotum and elytra as in *hoegi*, except median third of declivital excavation smooth, with numerous minute, impressed points.

Female (holotype).— Length 1.6 mm; similar to female *hoegi*, except transverse impression above epistoma deeper, its upper margin on median line rising very abruptly to conspicuous median tubercle, tubercle much larger than in *hoegi*, frons protruding slightly toward tubercle; elytral declivity smooth, with points.

Type Locality.— Volcan Poas, Heredia, Costa Rica.

Type Material.— The female holotype, male allotype, and two paratypes were taken at the type locality on 14-VII-63, 1500 m, No. 44, tree branch, S. L. Wood. Five paratypes bear similar data except 19-VI-66, 2600 m, No. 4, shrub branch.

The holotype, allotype, and paratypes are in my collection.

Monarthrum fastigiorum, n. sp.

This species is distinguished from *insignatum* Wood by the smaller size, by the more protuberant female frons with a subcarinate dorsal continuation of the median tubercle, and by the different male declivity.

Male (allotype).— Length 2.0 mm, 2.7 times as long as wide; color brown, somewhat bicolored.

Frons as in *insignatum*, except with a fine, low, median carina.

Pronotum and elytral disc as in *insignatum*. Elytral declivity similar to *insignatum*, except steeper, more widely, more shallowly impressed, about one-third of impressed area lateral to a line drawn from spine 1 to spine 2, spine 2 equal distance from suture and lateral margin.

Female (holotype).— Length 2.3 mm; similar to female *insig-*

natum, except frons more protuberant, median tubercle larger, with weak carina extending from its summit to upper level of eyes, surface more coarsely, more uniformly reticulate; declivital spine 2 almost as close to suture as to lateral margin.

Type Locality.— Tapanti, Cartago, Costa Rica.

Type Material.— The female holotype, male allotype, and one male paratype were taken at the type locality on 24-X-63, 1300 m, No. 245, from a woody vine, by me.

The holotype, allotype, and paratype are in my collection.

Monarthrum bidentatum, n. sp.

This species is distinguished from *bidens* (Blandford) by the smaller size, by the more finely punctured frons, and by other differences on the female frons and on the male declivity.

Male.— Length 2.3 mm (paratype 2.3-2.5 mm), 2.8 times as long as wide; color dark brown.

Frons broadly convex, a distinct, transverse impression just above epistoma; surface almost smooth, except rugose-reticulate in impressed area, upper areas with impressed points and a few fine punctures; vestiture inconspicuous.

Pronotum 1.2 times as long as wide; as in *punctifrons* (Blandford) and other allied species.

Elytra 1.5 times as long as wide, 1.3 times as long as pronotum; sides straight and parallel on basal two-thirds, converging very slightly to level of sutural apex, then abruptly rounded behind, except moderately emarginate on median fourth; surface reticulate, punctures minute, confused. Declivity rather abrupt, steep, broadly sulcate; sulcus widest between spines 1 and 2; spine 1 at base on interstriae 3, very small; spine 2 closer to suture than spine 1, or to lateral margin, its lower margin at level of sutural apex; spine 2 laterally compressed, not as high as length of its longitudinal basal axis, its summit emarginate and bituberculate; surface reticulate. Vestiture sparse, confined to declivity.

Female.— Similar to male, except transverse frontal impression very deep, deepest on its median third, occupying lower two-thirds of area below upper level of eyes, punctures in lateral areas larger, deeper; posterior face of antennal club ornamented by long hair; anterior margin of pronotum unarmed; declivity much more shallowly, more narrowly sulcate, lateral margins more evenly rounded, spines 1 and 2 of similar size and conical shape, equally spaced from suture.

Type Locality.— Six miles or 9 km NE Teziutlan, Puebla, Mexico.

Type Material.— The male holotype, female allotype, and 31 paratypes were taken at the type locality on 2-VII-67, 1600 m, Nos. 135 and 145 (type), in *Alnus*, No. 140, in a tree limb, by me.

The holotype, allotype, and paratypes are in my collection.

Monarthrum notatum, n. sp.

This species is distinguished from *bidentatum* Wood by the color, by the conical spine 2 on the male declivity, and by the deeper, narrower declivital impression.

Male.— Length 2.5 mm (paratypes 2.2-2.5 mm), 3.2 times as long as wide; color dark brown, most specimens with elytral disc yellowish brown.

Frons as in *bidentatum*, except punctures larger. Pronotum and elytra disc as in *bidentatum*; elytral declivity much more deeply impressed than in *bidentatum*, lateral margins more narrowly rounded, spine 2 conical, much larger than 1, its height equal to its basal width, much closer to lateral margin than to suture, surface reticulate, except smooth on interstriae 2. Vestiture confined to declivity, sparse.

Female.— Similar to female *dentatum*, except frons more evenly convex, deepest part of transverse impression rugose-reticulate (smooth in *bidentatum*); declivital sulcus much deeper, narrower, sutural emargination deeper, narrower, its margins distinctly elevated.

Type Locality.— Volcan Poas, Heredia, Costa Rica.

Type Material.— The male holotype, female allotype, and 11 paratypes were taken at the type locality on 14-VII-63, 2500 m, No. 50, from a large log; one paratype is from the same locality 19-VI-66, 2600 m, No. 7, leguminose shrub; and two paratypes are from Cerro Punta (labeled Volcan Chiriqui), Panama, 11-I-64, 1800 m, No. 371, *Inga*; all taken by me.

The holotype, allotype, and paratypes are in my collection.

Monarthrum limulum, n. sp.

This species is distinguished from *robustum* (Schedl) by the smoother pronotal disc, by the minute declivital granules which have replaced the punctures, and by having spine 2 strongly displaced toward the suture.

Male.— Length 2.4 mm (paratypes 2.2-2.6 mm), 2.5 times as long as wide; color brown.

Frons essentially as in *robustum*.

Pronotum as in *robustum* except disc smooth, minutely reticulate, punctures very minute.

Elytra with basic contours about as in *robustum*, with declivity commencing at middle, except lower half steeper; disc reticulate, punctures very fine, confused; declivital punctures anterior to spine 1 replaced by minute granules, granules on middle third almost obsolete, granules below spine 2 rather coarse; spine 1 conical, without ridge extending cephalad from its summit; spine 2 slightly closer to lateral margin than to suture, not connected to lateral margin, conical, slightly larger than in *robustum*; declivital surfaces reticu-

late, almost rugose in some areas. Vestiture confined to declivity, of fine, short, moderately abundant hair.

Female.— Similar to female *robustum*, except frons more coarsely punctured; pronotal disc more finely punctured; declivity reticulate, punctures minute with most of them accompanied by a very fine granule; declivital spine 2 almost as close to suture as to lateral margin.

Type Locality.— Tapanti, Cartago, Costa Rica.

Type Material.— The male holotype, female allotype, and 12 paratypes were taken at the type locality on 17-IX-63, 1300 m, No. 178, from a woody vine, by me.

The holotype, allotype, and paratypes are in my collection.

Monarthrum carinulum, n. sp.

This species is distinguished from *vittatum* (Blandford) by the absence of a transverse frontal groove and the presence of a median frontal carina in both sexes, and by the different male declivity.

Male.— Length 2.6 mm (paratypes 2.3-2.6 mm), 2.7 times as long as wide; color brown.

Frons broadly convex, a low, subacute median carina extending from epistoma almost to upper level of eyes; surface strongly reticulate, punctures fine, moderately abundant; glabrous.

Pronotum, elytral disc, and declivity as in *insignatum* Wood.

Female.— Similar to male except frontal carina higher and longer; posterior face of antennal club ornamented by a tuft of hair; declivity less strongly impressed, slightly narrower, spines 1 and 2 slightly smaller, tubercle at apex of striae 1 entirely absent.

Type Locality.— Tapanti, Cartago, Costa Rica.

Type Material.— The male holotype, female allotype, and eight paratypes were taken on 26-XI-63, 1300 m, No. 265, in *Phoebe mexicana* branches, by me; six paratypes bear similar data except 17-IX-63, No. 184 in *Miconia caudata*, and No. 178 in a woody vine.

The holotype, allotype, and paratypes are in my collection.

Monarthrum subgranulatum, n. sp.

This species is distinguished from *granulatum* Bright by the frontal and declivital characters described below.

Male.— Length 2.7 mm (paratypes 2.4-2.8 mm), 2.7 times as long as wide; color dark reddish brown.

Frons broadly convex, a weak transverse impression just above epistomal margin; lower half of area below upper level of eyes strongly rugose-reticulate, upper area smooth, with moderately abundant impressed points and rather small punctures; transition between areas rather abrupt; rugose area sparsely, finely pubescent.

Pronotum and elytral disc essentially as in *punctifrons* (Blandford). Elytral declivity steep, strongly sulcate, more broadly flattened below spine 2; sulcus occupying median half on upper two-thirds, sutural interstriae feebly elevated, gradually ascending to broadly rounded, rather strongly elevated lateral margins; spine 1 very small, at middle on margin; spine 2 one-fourth declivital length from apex, slightly closer to lateral margin than to suture, moderately large, conical, about as high as its basal width; inner margin of middle third of sulcus, just mesad of spine 1, armed by a row of about four to six small granules all smaller than spine 1; surface reticulate. Vestiture very sparse, confined to margins of declivity.

Female.— Similar to male, except rugose area on frons slightly larger and with much more abundant, fine, hairlike pubescence; posterior face of antennal club ornamented by a tuft of long hair; anterior margin of pronotum unarmed; declivity less strongly impressed, lateral margins more broadly rounded, spine 2 smaller, granules absent near summit of inner margin.

Type Locality.— Cerro Peña Blanca, Honduras.

Type Material.— The male holotype, female allotype, and 26 paratypes were taken at the type locality on 23-IV-64, 1900 m, No. 531, from *Persea popenoi*, by me.

The holotype, allotype, and paratypes are in my collection.

Monarthrum infradentatum, n. sp.

This species is distinguished from all preceding species by the obliquely truncate elytral declivity, with the ventrolateral margin acutely elevated from the sutural emargination to the level of spine 1 and by the absence of spine 2. It is distinguished from the three following species by the presence of a large spine on the margin of the apical emargination of the elytra.

Male.— Length 1.4 mm, about 3.0 times as long as wide (elytra spread); color dark reddish brown, base of pronotum pale.

Frons broadly convex, a weak transverse impression just above epistoma; surface reticulate, small punctures obscurely indicated.

Pronotum 1.3 times as long as wide; about as in *punctifrons* (Blandford) except anterior margin armed by eight serrations.

Elytra about 1.7 times as long as wide, about 1.3 times as long as pronotum, sides almost straight and parallel to level of sutural apex, very broadly rounded to apical denticles and emargination; surface reticulate, minute punctures apparently in rows, except confused near base. Declivity very steep, truncate, shallowly concave; basal margin rather abruptly rounded to striae 3, acutely margined from there to apical emargination; spine 1 small, conical, situated just below margin on interstriae 3; face of declivity smooth, shining, with minute points and small punctures, except somewhat rugulose near margins; sutural emargination rather narrow, deep, its margin

extended perpendicular to declivital surface forming a large denticle on its basal half, denticle height equal to its greatest basal width. Vestiture confined to declivity near margins, sparse, mostly short.

Female.— Similar to male, except posterior face of antennal club ornamented by long hair; anterior margin of pronotum unarmed; declivity weakly convex, lateral margin acutely raised on lower third, margin of emargination weakly elevated, denticle not evident.

Type Locality.— Rincon de Osa, Puntarenas, Costa Rica.

Type Material.— The male holotype, female allotype, and one male paratype were taken at the type locality on 11-VIII-66, 30 m, No. 86, from a tree limb, by me.

The holotype, allotype, and paratype are in my collection.

Monarthrum corculum, n. sp.

This species is distinguished from *infradentatum* Wood by the larger size and by characters of the elytral declivity.

Male.— Length 1.8 mm (paratypes 1.7-1.9 mm), 2.8 times as long as wide; color dark reddish brown, except base of pronotum pale.

Frons, pronotum, and elytral disc as in *infradentatum*. Elytral declivity similar to *infradentatum*, except declivital outline heart-shaped, spine 1 on basal margin at interstriae 3, spine 2 two-thirds declivital length from base equal distances from suture and lateral margin; sutural emargination strongly obtuse, shallow, its margin moderately elevated but not forming a tooth; declivital surface shining, finely, rather closely punctured. Vestiture confined to declivity, consisting of moderately abundant, short hair.

Female.— Similar to male, except frons with a rather strong, transverse impression just above epistoma; posterior face of antennal club ornamented by a tuft of long hair; anterior margin of pronotum unarmed; declivity with acute margin only on lower third, apical margin less strongly elevated.

Type Locality.— Turrialba, Cartago, Costa Rica.

Type Material.— The male holotype, female allotype, and 42 paratypes were taken at the type locality on 9-III-64, 700 m, No. 497B, from a woody vine, by me. One paratype is from Finca La Lola, Limon, Costa Rica, 22-VI-63, *Theobroma cacao*, J. L. Saunders.

The holotype, allotype, and paratypes are in my collection.

Monarthrum posticum, n. sp.

This species is distinguished from *corculum* Wood by the much more coarsely punctured frons, by the smooth elytra, and by the different declivity.

Male.— Length 1.9 mm (paratypes 1.7-2.1 mm), 2.6 times as

long as wide; color dark reddish brown, except base of pronotum usually pale.

Frons as in *corculum*, except surface smooth, with rather dense impressed points and rather coarse punctures.

Pronotum and elytra similar to *corculum*, except slightly stouter; elytral disc smooth and shining, except obscurely reticulate near base, stria punctures minute, in rows. Elytral declivity as in *corculum*, except much less strongly impressed, posterolateral angles much more abrupt, surface smoother, brightly shining, punctures much larger.

Female.— Similar to male, except frons more nearly subgranulate; posterior face of antennal club ornamented by a tuft of long hair; anterior margin of pronotum unarmed; declivity with lateral margin on basal third more broadly rounded, lateral two-thirds more nearly convex.

Type Locality.— Santa Ana, San José, Costa Rica.

Type Material.— The male holotype, female allotype, and 17 paratypes were taken at the type locality on 4-X-63, 1300 m, No. 222, from a tree limb; 14 paratypes are from Finca Gromaco on Río Coto Brus, Puntarenas, 4-VII-63, 500 m, Nos. 57, 68, 80, woody vines and tree seedlings; 19 paratypes are from Rincón de Osa, Puntarenas, 11-VIII-66, 30 m, No. 85, tree limb; 1 paratype is from Tapanti, Cartago, 24-X-63, 1300 m, No. 268, tree limb; all were taken in Costa Rica by me.

The holotype, allotype, and paratypes are in my collection.

Monarthrum proximum, n. sp.

This species is distinguished from *posticum* Wood by the larger average size and by characters of the frons and declivity as described below.

Male.— Length 2.3 mm (paratypes 1.9-2.3 mm), 2.4 times as long as wide. As in *posticum*, except frons more finely punctured, reticulate on lower half; posterolateral angles of elytral declivity abrupt (narrowly rounded in *posticum*), distance between apical and subapical margins greater.

Female.— Similar to female *posticum*, except transverse impression above epistoma deeper, more abrupt, frons almost entirely reticulate.

Type Locality.— San Isidro del General, Puntarenas, Costa Rica.

Type Material.— The male holotype, female allotype, and seven paratypes were taken at the type locality on 5-XII-63, 1000 m, No. 284, from *Miconia pubescens*; two paratypes are from Finca Gromaco on Río Coto Brus, Puntarenas, 14-VII-63, 500 m, No. 57, log; 20 paratypes are from Rincón de Osa, Puntarenas, 11-VIII-66, 30 m, No. 85, limb; and one paratype is from Río Damitas, Dota Mts., San José, 22-VIII-63, 250 m; all were taken in Costa Rica by me.

The holotype, allotype, and paratypes are in my collection.

Corthycyclon caliginis, n. sp.

This species is distinguished from others in the genus by the size, by the rather strongly, continuously elevated declivital interstriae 1, with 2 moderately impressed, and by the absence of punctures and tubercles on the declivity.

Female.— Length 2.1 mm (paratypes 2.0-2.1 mm), 2.3 times as long as wide; color almost black.

Frons feebly concave from eye to eye from epistoma to vertex, surface reticulate, except almost smooth on lower median area, punctures small to minute, shallow, not clearly impressed; vestiture of very fine, moderately long hair of uniform distribution, slightly longer at margins. Antennal club 1.5 times as long as wide; a small tuft of hair at apex.

Pronotum 1.04 times as long as wide; sides almost straight and parallel on basal half, rather narrowly rounded in front; anterior margin armed by a pair of slender, median teeth; summit indefinite, slightly behind middle; anterior half closely asperate; posterior half reticulate, reticulation also extending between asperities on anterior half, punctures small, moderately abundant, those near base of disc finely tuberculate on their posterior margins. Pubescence of fine, short, moderately abundant hair.

Elytra 1.4 times as long as wide, 1.5 times as long as pronotum; sides almost straight and parallel on basal two-thirds, rather broadly rounded behind; disc subshining, surface with obscurely impressed lines and other minute irregularities; punctures obsolete on posterior half, very small and confused on basal half. Declivity steep, convex, except moderately sulcate on interstriae 2, 1 uniformly elevated from base to near apex; surface reticulate, punctures and granules obsolete. Vestiture largely confined to posterior third of elytra, of fine, short, confused hair.

Male.— Similar to female, except frons moderately convex, strongly reticulate, with fine punctures, subglabrous; antennal club without apical tuft of hair.

Type Locality.— Sixteen km SE Cartago, Cartago, Costa Rica.

Type Material.— The female holotype, male allotype, and two paratypes were taken at the type locality on 24-IX-63, 1800 m, Nos. 195, from a tree seedling, and 196 (type) from a woody vine, by me.

The holotype, allotype, and paratypes are in my collection.

Corthycyclon furvus, n. sp.

This species is distinguished from *caliginis* Wood by the smaller size, by the stouter body form, by the more deeply concave female frons, and by the row of subgranulate punctures on declivital interstriae 3.

Female.— Length 1.4 mm (paratypes 1.3-1.6 mm), 2.1 times as long as wide; color almost black.

Frons as in *caliginis*, except rather deeply concave, rather strong-

ly reticulate over entire surface, punctures moderately coarse, most of them distinctly impressed. Pronotum and elytra as in *caliginis*, except declivity more finely, more uniformly reticulate, and interstriae 3 with a row of subreticulate punctures.

Male.— Similar to female, except sexual differences as in *caliginis*.

Type Locality.— Peralta, Cartago, Costa Rica.

Type Material.— The female holotype, male allotype, and two paratypes were taken at the type locality on 10-III-64, 500 m, No. 461, from a woody vine, by me. One paratype is from Tapanti, Cartago, Costa Rica, 24-X-63, 1300 m, woody vine, S. L. Wood.

The holotype, allotype and paratypes are in my collection.

Corthycyclon morulus, n. sp.

This species is distinguished by the compact antennal club and by the characters of the elytral declivity indicated below.

Female.— Length 2.1 mm, 2.5 times as long as wide; color almost black.

Frons essentially as in *furvus* Wood, except surface subreticulate, punctures rather fine, abundant, distinct, vestiture of very fine hair. Antennal club 1.2 times as long as wide.

Pronotum and elytra essentially as in *caliginis* Wood, except pronotal disc more coarsely punctured and interstriae 2 rather weakly impressed and without granules, 1 distinctly, moderately elevated, 1 and 3 each armed by a row of small, rounded, rather widely spaced granules. Vestiture sparse, confined to odd-numbered declivital interstriae, fine, rather short.

Type Locality.— Sixteen km SE Cartago, Cartago, Costa Rica.

Type Material.— The female holotype was taken at the type locality on 3-VIII-63, 1800 m, No. 18, from a small branch of *Conostegia oerstediana*, by me.

The holotype is in my collection.

Corthycyclon tardus, n. sp.

This species is distinguished from *aztecus* Bright by the smaller size, by the smaller declivital granules, by the more abundant short and sparse long declivital hair, and by the female antennal club.

Female.— Length 1.7 mm (paratypes 1.5-1.7 mm), 2.5 times as long as wide; color dark brown.

Frons about as in *morulus* Wood, except obscurely reticulate, punctures smaller, median half of epistomal margin transversely carinate. Antennal club 2.5 times as long as wide, tapered from basal third to apex; apex ornamented by a tuft of about two or three long hairs.

Pronotum and elytral disc as in *morulus*, except pronotal disc with punctures minute, almost obsolete. Elytral declivity steep,

convex; interstriae 1 feebly if at all elevated, striae punctures minute to obsolete; surface shining; with numerous very minute, confused punctures, those bearing short hair often minutely granulate, particularly near base of declivity, interstriae 1 and 3 each bearing a few slightly larger granules at bases of longest setae. Vestiture confined to declivity, of moderately abundant fine, short hair and sparse rows of long hair on odd-numbered interstriae.

Male.— Similar to female, except frons convex, reticulate, sparsely punctured, subglabrous; antennal club less than twice as long as wide, without long hair.

Type Locality.— Sixteen km SE Cartago, Cartago, Costa Rica.

Type Material.— The female holotype, male allotype, and four paratypes were taken at the type locality on 24-IX-63, 1800 m, No. 197, from *Siparuna nicaraguensis*, by me. One paratype is from Volcan Poas, Heredia, Costa Rica, 6-IX-63, 2500 m, No. 169, *Vaccinium consanguineum*, S. L. Wood. Two paratypes are from Cerro Campana, Panama, 26-VII-66, 1000 m, No. 33, *Cecropia* petiole, S. L. Wood.

The holotype, allotype, and paratypes are in my collection.

Corthylocurus debilis, n. sp.

This species is distinguished from *aguacatensis* (Schedl) by the characters of the female frons and elytral declivity as indicated below.

Female.— Length 1.5 mm, 2.4 times as long as wide; color yellowish brown.

Frontal area narrow for this genus, 1.3 times as wide as long, somewhat shallowly, biconcavely impressed on quadrate area from epistoma to about three-fourths distance to upper level of eyes; narrow median line sharply impressed, its lateral margins shining, weakly elevated, lateral impressed areas covered by rather dense, very short, stout setae, those near median line apparently on a spongy area; upper areas convex, reticulate, glabrous. Antennal club large, broadly obovate, 1.2 times as long as wide; tuft of hair on posterior face very poorly developed.

Pronotum and elytra as in *aguacatensis*, except elytral declivity more brightly shining, very feebly sulcate, and granules on interstriae 3 obsolete.

Male.— Similar to female, except frons convex, reticulate, sparsely punctured, subglabrous; anterior margin of pronotum armed by six serrations, median pair much larger.

Type Locality.— Beverley, Limón, Costa Rica.

Type Material.— The female holotype was taken at the type locality on 26-VIII-63, 7 m, No. 154, from a woody vine, by me. The male allotype was taken at Ft. Clayton, Canal Zone, Panama, 22-XII-63, 30 m, No. 319, from *Serjania*, by me.

The holotype and allotype are in my collection.



1974. "New species of American Corthylini (Coleoptera: Scolytidae)." *The Great Basin naturalist* 34, 135–150. <https://doi.org/10.5962/bhl.part.15513>.

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