

NEW SYNONYMY IN THE PLATYPODIDAE AND SCOLYTIDAE (COLEOPTERA)¹

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During the past several years I have had the opportunity to examine numerous types of species in the families Platypodidae and Scolytidae. A number of synonyms not previously published have been discovered and several species have been found that were assigned to the wrong genus. On the following pages new synonymies and new combinations are presented for American species or those that affect the nomenclature of American species.

PLATYPODIDAE

Platypus coronatus Schedl

Platypus coronatus Schedl, 1933, Revista Ent. 3:170 (Vara Blanca, Costa Rica; Schedl Collection).

Platypus platyurius Schedl, 1933, Revista Ent. 3:176 (Santiago, Costa Rica; Schedl Collection). *New synonymy*.

The female holotype of *coronatus* Schedl was compared directly to females and the male holotype of *platyurius* Schedl to males that were collected in series from their tunnels at Cerro de la Muerte. San José Prov.; Volcan Poas, Heredia Prov.; and Volcan Irazu, Cartago Prov., Costa Rica. The first series came from *Brunnelia costaricensis*, the second from an unknown log, possibly *Cedrus*, and the third from *Alnus acuminata* and *Quercus* sp. Because the sexes were definitely associated it is clear that the two names designate the same species.

Platypus equadorensis Schedl

Platypus equadorensis Schedl, 1933, Ann. Mag. Nat. Hist. (10)12:396 (Type label reads "Cachabé, low c., xi. 96, Rosenberg, Equador"; British Mus. Nat. Hist.)

Platypus manipularis Schedl, 1937, Proc. Roy. Ent. Soc. London (B)6:14 (Type label reads "Cachabé, low c., I. 97, Rosenberg"; British Mus. Nat. Hist.). *New synonymy*.

When the two male holotypes of *equadorensis* Schedl and *manipularis* Schedl were compared directly, differences were not apparent. The name *manipularis* Schedl should, therefore, be placed in synonymy under the older name *equadorensis* Schedl.

Platypus pini Hopkins

Platypus pini Hopkins, 1905 (1906), Proc. Ent. Soc. Washington (Preprint) 7:71 (Chaleo, Mexico; U.S. Nat. Mus.).

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Platypus quadridens Schedl, 1937, Ent. Blätt. 33:38 (Sierra de Durango, Mexico; Schedl Collection). *New synonymy*.

The male holotype of *pini* Hopkins was compared to my series from Mexico and the western United States (Wood, 1958, Gt. Basin Nat. 18:37) and found to represent a relatively common species that attacks the stumps and lower bole of certain species of *Pinus*. The male type of *quadridens* Schedl was recently examined and compared directly to representatives of my series and found to be identical. Schedl's name, therefore, should be placed in synonymy under *pini* Hopkins.

New locality records for this species include 60 miles west of Durango, Durango, Mexico, and Cerro Peña Blanca, Honduras (from *Pinus pseudostrobus*).

SCOLYTIDAE

Ancyloderes Blackman

Ancyloderes Blackman, 1938, Proc. Ent. Soc. Washington 40:205 (*Cryphalus pilosus* Leconte, original designation).

Blackman's genus *Ancyloderes* was placed in synonymy under the genus *Conophthocranulus* Schedl by Schedl in 1950 (Dusenja 1:46). Recently the type species *blackmani* Schedl and all species presently included in *Conophthocranulus* were examined. While *Ancyloderes* and *Conophthocranulus* are both properly placed in the Pityophthorini they are not at all closely related. *Ancyloderes* is rather closely allied to *Gnathotrachus* Eichhoff and *Conophthocranulus* to *Conophthorus* Hopkins.

Brachyspartus Ferrari

Brachyspartus Ferrari, 1867, Die Forst- und Baumzuchtschädlichen Borkenkäfer, p. 65 (*Brachyspartus moritzi* Ferrari, monobasic).

Thylurcos Schedl, 1939, Mitt. Münchner Ent. Ges. 29:567 (*Corthylus moritzi* Ferrari, original designation?). *New synonymy*.

When Schedl established the genus *Thylurcos* he evidently overlooked the fact that one of the two species he included in it, *Brachyspartus moritzi* which he had previously referred to *Corthylus*, was the type-species of the monobasic genus *Brachyspartus*. It is implied, but not clearly stated, that *moritzi* is also the type-species of *Thylurcos*. If this is correct, then the two genera are objective homonyms of one another. If not, then I here designate *Brachyspartus* (or *Corthylus*) *moritzi* Ferrari as the type-species of *Thylurcos* in order to remove all doubt from the identity of the genus.

The above action leaves the genus that has been known as *Brachyspartus* in the literature, without a name. The following is presented to fill this need.

Corthylocurus, n.g.

Brachyspartus: Blandford, 1904, Biol. Centr.-Amer., Coleopt. 4(6):264.

As indicated above the generic name *Brachyspartus* is fixed by its type-species designation to *moritzi* Ferrari which is generically

different from most of the species that have been assigned to *Brachyspartus*. Since this genus is without a name, I propose the name *Corthylocurus* for it. The new genus is characterized as follows.

Corthylocurus is allied to *Corthylus* Erichson and *Brachyspartus* Ferrari, but is distinguished from the former by the more simple, uniformly pubescent antennal club with a special cirrus poorly developed and with two simple sutures; fore tibiae subinflated and with minute tubercles on the posterior face. It is distinguished from *Brachyspartus* by the two sutures of the antennal club and by the entire elytral apex. The type-species of *Corthylocurus* is *Brachyspartus barbatus* Blandford (*op. cit.*, p. 265).

A revision of the genus is in preparation.

Ips DeGeer

Ips DeGeer, 1775, Memoires pour servir a l'histoire des insectes 5:190 (name validated); Hopkins, 1914, Proc. U.S. Nat. Mus. 48:124 (*Dermestes typographus* Linnaeus, designated type-species).

In preparing for a revision of the Scolytidae for Genera Insectorum, Schedl (1964, Reichenbachia 2:218) grouped most of the genera of the tribe *Ipini* into the one genus *Ips* DeGeer. Schedl's action is consistent with a somewhat similar grouping by Hagedorn (1910, Gen. Ins. 111:101) and certainly was not taken without considerable study and thought. However, it is felt that a more extensive and detailed study of all possible anatomical parts exhibiting variation should be completed before such drastic grouping of widely recognized genera is accepted. Following such a study some of the genera, such as *Orthotomicus* Ferrari, almost certainly will fall into synonymy. It is also felt that the genus *Mimips*, not mentioned by Schedl, will occupy an important place in determining the generic limits within this group. Until such a study is completed I prefer to recognize *Ips* DeGeer, *Orthotomicus* Ferrari, *Acanthotomicus* Blandford, *Pityokteines* Fuchs, and *Orthotomides* Wood as distinct genera.

Monarthrum Kirsch

Monarthrum Kirsch, 1866, Berliner Ent. Zeitschr. 10:213 (*Monarthrum chapuisii* Kirsch, monobasic).

Cosmocorynus Ferrari, 1867, Die Forst- und Baumzuchtschädlichen Borkenkäfer, p. 62 (*Cosmocorynus cristatus* Ferrari, monobasic).

Pterocyclon Eichhoff, 1868, Berliner Ent. Zeitschr. 12:277 (Original description); Hopkins, 1914, Proc. U.S. Nat. Mus. 48:128 (*Pterocyclon laterale* Eichhoff, designated as the type-species).

Recently I collected a common species of ambrosia beetle in Mexico, from *Quercus* sp., that was identified as *Pterocyclon laterale* from the works of Eichhoff and Blandford. Upon comparing my males with Blandford's Biologia Centrali-Americana material of this species, two males from Mexico, they were found to belong to the same species. In the Schedl collection Eichhoff's species was not named as such, but the female was represented by the unique type of *Cosmocorynus trifasciatus* Schedl. After encountering this pre-

sumed synonymy involving the type-species of *Monarthrum* in the male of *laterale* and its female *Cosmocorynus trifasciatus*, the type species of *Cosmocorynus*, *cristatus* Ferrari, was examined. The species *laterale* and *cristatus* obviously are congeneric, but *cristatus* appears more closely allied to the type species of *Monarthrum*, *chapuisi* Kirsch, and to other species assigned to *Monarthrum* by Eggers (1935, *Revista Ent.* 5:78), than to *laterale*.

From the above examination of all three type-species and other species belonging to this species group, it is clear that *Monarthrum* Kirsch (1866), *Cosmocorynus* Ferrari (1867) and *Pterocyclon* Eichhoff (1868) are synonymous. Since *Monarthrum* Kirsch is the senior name it should be used to designate the genus. Eichhoff's (1869, *Berliner Ent. Zeitschr.* 8:299) contention that *Monarthrum* Kirsch has no status because of an error in recording the number of funicular segments in the original description is invalid under the International Code of Zoological Nomenclature.

Pteleobius Bedel

Acrantus Broun, 1882, *Ann. Mag. Nat. Hist.* (5)9:409 (*Homarus mundulus* Brown, monobasic). *Preoccupied*.

Pteleobius Bedel, 1888, *Ann. Soc. Ent. France* (hors ser.) 6:392-3, 411. (Name validated); Hopkins, 1914, *Proc. U. S. Nat. Mus.* 48:128 (*Bostrichus vittatus* Fabricius, designated type-species).

In a previous reference to this genus (Wood, 1962, *Gt. Basin Nat.* 22:77) the possibility of synonymy between *Pteleobius* Bedel and *Dendrotrupes* Broun was made. Since that time I have examined the types of all four of Broun's species that were referred to his genera *Acrantus* and *Dendrotrupes*. It is now clear that my series of *Acrantus opacus* were actually of *Dendrotrupes costiceps*; therefore, the genus *Dendrotrupes* is distinct from *Pteleobius*. The type-species of *Acrantus*, *Homarus mundulus* Brown, and the type-species of *Pteleobius*, *Bostrichus vittatus* Fabricius, however, are congeneric. As I indicated earlier (Wood, *loc. cit.*), the name *Acrantus* is preoccupied and must be replaced by *Pteleobius*.

For new synonymy of species involved in these genera see the alphabetical listing of species below.

Trypodendron Stephens

Trypodendron Stephens, 1830, *Illustrations of British Entomology*, *Mandibulata* 3:353 (Original description included (1) *Dermestes domesticus* Linnaeus and (2) *Bostrichus dispar* Fabricius); Westwood, 1838, *Synopsis of the Genera of British Insects*, p. 39 (Typical species: *domesticus* L.); Thompson, 1859, *Skandinaviens Coleoptera Synoptiskt Bearbetade* 1:146 ("Typus: *T. domesticum* Lin.")

Xyloterus Erichson, 1836, *Archiv Naturgesch.* 2(1):60 (Original description included (1) *Dermestes domesticus* Linnaeus, (2) *Bostrichus lineatus* Olivier, and (3) *Bostrichus 5-lineatus* Adams); Thompson, 1859, *Skandinaviens Coleoptera Synoptiskt Bearbetade* 1:46 (Typus: *Xyloterus lineatus* Gyllenhal, which, by Gyllenhal's citation, was *Bostrichus lineatus* Oliver).

In attempting to clarify the status of *Trypodendron* Stephens and *Xyloterus* Erichson, Schedl (1964, *Reichenbachia* 2:211-212) correctly points out that Stephens' description of *Trypodendron* refers to *Bostrichus dispar* Fabricius, the first species listed, and not to *Dermestes domesticus* Linnaeus, the other species included in the original description of the genus. Because the two species are now placed in different genera Schedl concluded that Stephens' name *Trypodendron* should remain with *dispar* and that *domesticus* should be placed in *Xyloterus* which, under this interpretation, would become a valid genus.

Because Schedl's interpretation, based entirely on the original description of *Trypodendron*, is not consistent with the International Code of Zoological Nomenclature, as adopted by the XV International Congress of Zoology, the status of *Trypodendron* must be re-examined.

Under the Code the generic name *Trypodendron* was properly validated, both a description and two valid species were included in the original diagnosis. Since, under Article 42b of the Code, the basis of a genus is objectively defined *only* by reference to its type-species, the presently accepted concept of *Trypodendron* was fixed, not by its author, but the subsequent author who designated a type-species. Westwood (1838:39) designated *Dermestes domesticus* Linnaeus as the "typical species." Since there may be some question of the validity of Westwood's designation because of his usage of the word "typical," it is pointed out that Thompson (1859, 1:146) also designated *domesticus* Linnaeus as the type of the genus. Therefore, the wording of the original description, which actually does not fit *dispar* either, has no bearing on this problem under the present International Code of Zoological Nomenclature. *Trypodendron* Stephens remains valid and *Xyloterus* Erichson must be treated as a junior synonym.

Ancyloderes pilosus (Leconte)

Cryphalus pilosus Leconte, 1868, Trans. Amer. Ent. Soc. 2:154, 156 (Middle California; Mus. Comp. Zool.).

Ancyloderes pilosus Blackman, 1938, Proc. Ent. Soc. Washington 40:205.

Ancyloderes saltoni Blackman, 1938, Proc. Ent. Soc. Washington 40:206. (Flagstaff, Arizona; U.S. Nat. Mus.). *New synonymy*.

While the types and other specimens from the two type localities show minor differences between *pilosus* (Leconte) and *saltoni* Blackman, specimens from other localities exhibit intermediate characters that make it impossible to separate the two forms. Blackman's *saltoni*, therefore, must be placed in synonymy under the older name *pilosus* (Leconte).

In addition to the types and other specimens mentioned by Blackman (*op. cit.*, p. 206), specimens from the following localities have been examined: ARIZONA: Baboquivari Mts., Oak Creek Canyon, and Patagonia. CALIFORNIA: Pasadena. DURANGO, MEXICO: 30 miles west of El Salto. All known specimens were taken at light in oak-pine growth; the host is unknown.

Brachyspartus emarginatus (Eggers), n. comb.

Corthylus emarginatus Eggers, 1943, Mitt. Münchner Ent. Ges. 33:380 (Bolivia; Schedl Collection).

The female type of *emarginatus* Eggers exhibits antennal and declivital characters on the elytra that indicate its relationship to *moritzi* Ferrari, type-species of the genus *Brachyspartus*. This species should, therefore, be transferred from *Corthylus* to *Brachyspartus*.

Corthylus flagellifer Blandford

Corthylus flagellifer Blandford, 1904, Biol. Centr.-Amer., Colept. 4(6):255 (Toxpam, Mexico; British Mus. Nat. Hist.).

Corthylus cirrus Schedl, 1940, An. Esc. Nac. Cienc. Biol. (Mexico) 1:351 (Xochitlan, Morelos, Mexico; Schedl Collection). *New synonymy*.

Corthylus nudiusculus Schedl, 1950, Dusenía 1:156 (Comitan, Mexico; Schedl Collection). *New synonymy*.

Of Blandford's type series of ten specimens mentioned in the original description, only seven are present at this time in the British Museum (Natural History). Because a type has not previously been designated from his syntypic series of *flagellifer*, and because more than one species may be represented, I hereby designate the second male, from Toxpam, Mexico, as the Lectotype. Blandford's specimens are arranged in the order they were mentioned in the original publication. Because it has been customary to regard the first specimen in Blandford's series as the type, it is proper to select Toxpam, Mexico, as the type locality; however, of the two male specimens from this locality, the first is in comparatively poor condition, and for this reason the second was designated as the type.

A male from my series collected at Tepic, Nayarit, was compared directly to the lectotype of *flagellifer* and found to be identical in all respects except size (2.9 mm. as compared to 2.7 mm. for the lectotype). My female, taken from the same tunnel as the male, was compared directly to the types of *cirrus* Schedl and *nudiusculus* Schedl and found to be identical in all essential characters. Because there is no question concerning the association of the sexes, *cirrus* and *nudiusculus* must be considered synonyms of *flagellifer*.

Cryphalomorphus expers Blandford, n. comb.

Hypothenemus expers Blandford, 1894, Trans. Ent. Soc. London, p. 85 (Kumamoto, Japan; British Mus. Nat. Hist.).

The type specimen of Blandford's *Hypothenemus expers* was examined and found to be a representative of the genus *Cryphalomorphus*.

Cryphalomorphus knabi Hopkins

Ernoporides knabi Hopkins, 1915, U.S. Dept. Agric. Rept. 99:34 (Cordoba, Mexico; U.S. Nat. Mus.).

Ernoporides floridensis Hopkins, 1915, U.S. Dept. Agric. Rept. 99:34 (Biscayne, Florida; U.S. Nat. Mus.). *New synonymy*

Hypothenemus ritchiei Sampson, 1918, Bull. Ent. Res. 8:295 (Jamaica; British Mus. Nat. Hist.). *New synonymy*.

Cyphalomorphus caraibicus Schedl, 1951, Dusenía 2:96 (Guadeloupe; Schedl Collection). *New synonymy*.

Cyphalomorphus subtriatus Schedl, 1952, Dusenía 3:360 (Mexico; Schedl Collection). *New synonymy*.

This abundant and widely distributed species has been recognized with difficulty because of the variability in size and depth of the elytral punctures. The examination of several hundred specimens from Florida, Guatemala and Honduras, and individual specimens from Mexico, Jamaica, Dominican Republic, and Guadeloupe, however, leaves little doubt that only one species occurs throughout the Caribbean area. The types of *floridensis* Hopkins, *ritchiei* Sampson, *caraibicus* Schedl and *subtriatus* Schedl were examined and compared directly to my material, as were specimens from Hopkins' series of *knabi*.

The host plants of this species include a wide variety of herbaceous and woody vines. Additions to the known list of hosts include *Ipomoea* sp. (Guatemala) and *Caloncytion tamnifolium* (Honduras). Other host plants await identification.

Dendrocranulus schedli, n.n.

Dendrocranulus cucurbitae Schedl, 1939, Arb. Morph. Tax. Ent. Berlin-Dahlem 6:45 (Hamburgfarm, Costa Rica; Schedl Collection). *Preoccupied*.

With the transfer of *Xylocleptes cucurbitae* Leconte (1879, U. S. Dept. Interior, Geol. Geograph. Surv. Bull. 5:519) to the genus *Dendrocranulus* (Wood, 1961, Coleopt. Bull. 15:41), Schedl's name *cucurbitae* became a junior homonym of the name used for Leconte's species. Because no synonyms are known for this species, the new name *Schedli* is proposed to replace *cucurbitae* Schedl.

Dendrotrupes costiceps Broun

Dendrotrupes costiceps Broun, 1881, Manual of the New Zealand Coleoptera, 2:741 (New Zealand; British Mus. Nat. Hist.).

Dendrotrupes vestitus Broun, 1881, Manual of the New Zealand Coleoptera 2:741 (New Zealand; British Mus. Nat. Hist. (*New synonymy*)).

The female holotype of *costiceps* Broun was compared directly to the male holotype and cotype of *vestitus* Broun. Except for the sexual differences on the frons they are identical. After examining several dozen specimens of both sexes, it was concluded that only one species was represented. Because Hopkins (1914) designated *costiceps* as the type-species of *Dendroterus*, it is here given priority over *vestitus*.

Gnathotrupes fimbriatus Schedl, n. comb.

Gnathotrichus fimbriatus Schedl, 1955, Rev. Chilena Ent. 4:259 (P. Arenas, Chile; Schedl Collection).

Following a study of the type-species of the genus *Gnathotrupes* Schedl and of part of the type series of *fimbriatus* Schedl, it was ap-

parent that *fimbriatus* should be transferred from the genus *Gnathotrichus* to *Gnathotrupes*.

Hylastes flohri (Eggers), n. comb.

Hylurgops flohri Eggers, 1930, Ent. Blätt. 26:166 (Mexico; Berlin Zool. Mus.)

The cotype of *Hylurgops flohri* Eggers, presently in the Schedl Collection, was examined and found to represent the genus *Hylastes*.

Hylocurus hirtellus (Leconte), n. comb.

Micracis hirtellus Leconte, 1876, Proc. Amer. Philos. Soc. 15:369 (Southern California; Mus. Comp. Zool.).

Presumably because the sexual dimorphism on the elytral declivity is poorly developed, *hirtellus* LeConte has been treated in the similar genus *Micracis*. Characters of the antennal club, of details of the elytra, and of the tibiae leave little doubt concerning the true affinities of this species. In order to make recent identification labels of specimens consistent with published synonymy, this species must be transferred to the genus *Hylocurus*.

Ips latidens LeConte

Tomicus latidens Leconte, 1874, Trans. Amer. Ent. Soc. 5:72 (California; Mus. Comp. Zool.).

In his placement of *latidens* LeConte and *sabinianae* Hopping in the genus *Orthotomicus*, Hopping (1963, Canadian Ent. 95:6) stressed the relationship of these species to *erosus* (Wollaston). However, he overlooked the fact that some relationship should have been established between *erosus* and *laricis* Fabricius, type-species of the genus *Orthotomicus*. The species group to which *erosus* and *latidens* belong, along with a few other species groups, is intermediate between *Ips* and *Orthotomicus* with a majority of the generic characters favoring *Ips*. The character of the second funicular segment in *Ips*, on which Hopping really based his transfer of *latidens* from *Ips*, is too unreliable for use in separating genera as measurements of his own drawings clearly show.

Mimips chiriquensis (Blandford), n. comb.

Xylocleptes chiriquensis Blandford, 1898, Biol. Centr.-Amer., Coleopt. 4(6):189 (Volcan Chiriqui, Panama; British Mus. Nat. Hist.).

Blandford's type series consists of three syntypic specimens, all apparently males. Although the first specimen has generally been regarded as the type it has never been designated. In order to fix the identity of the species, I here designate the first specimen in Blandford's series as the Lectotype of *chiriquensis*.

Monarthrum bisetosum Schedl, n. comb.

Brachyspartus bisetosus Schedl, 1954, Dusenja 5:38 (Rio Caraguata, Matto Grosso, Brazil; Schedl Collection).

The females in the type series of *Brachyspartus bisetosus* Schedl in the Schedl collection exhibit modifications of the frons somewhat similar to representatives of the *chapuisii* species group of the genus *Monarthrum*. The antennal funicle is two-segmented and the elytral declivity is also similar to that of some *Monarthrum* species. The species *bisetosus* should, therefore be transferred from *Brachyspartus* to the genus *Monarthrum* and have the gender of the specific name changed from masculine to neuter.

Monarthrum exornatum (Schedl), n. comb.

Pterocyclon exornatum Schedl, 1939, Münchner Ent. Ges. 29:575 (Colonia, Mexico; Schedl Collection).

Pterocyclon gracilicorneum Schedl, 1939, Münchner Ent. Ges. 29:576 (Jalapa, Mexico; Schedl Collection). *New synonymy*.

The male holotypes of *exornatum* Schedl and *gracilicorneum* Schedl were compared directly to one another and to my male specimens from Totalapan, Oaxaca, Mexico. Part of my material is intermediate between Schedl's very similar types and makes it necessary to place *gracilicorneum* in synonymy under *exornatum* because of page priority.

Monarthrum laterale (Eichhoff), n. comb.

Pterocyclon laterale Eichhoff, 1868, Berliner Ent. Zeitschr. 12:278 (Mexico; type presumed lost, Hamburg Mus.). Eichhoff, 1878, Mem. Soc. Roy. Sci. Liège (2)8:439.

Cosmocorynus trifasciatum Schedl, 1950, Dusenja 1:173 (Mexico; Schedl Collection). *New synonymy*.

This distinctive species is relatively common in *Quercus* in Mexico.

Representatives were independently identified as *laterale* Eichhoff by Blandford (1905, Biol. Centr.-Amer., Coleopt. vol. 4, pt. 6:281) and by myself from the two descriptions of the male by Eichhoff. The type presumably was a unique male that was lost in the destruction of the Hamburg Museum during World War II. Under normal circumstances the name would be set aside as unidentifiable until a comprehensive revisional study could fix its position. However, *laterale* is the type of the genus *Pterocyclon* Eichhoff which has had a dubious status from its beginning.

There is no mention of the number of specimens in the type series in either of Eichhoff's descriptions. The species was not present in the collection of Chapuis, a contemporary of Eichhoff who had duplicates of many of Eichhoff's species, nor was it available to Blandford for his study of Central American fauna. Because the species is not represented in the Schedl collection, where a few Eichhoff types now reside, and because no authentic representatives of the species have been reported by any of the current major authorities on Scolytidae, it is presumed the type was a unique specimen that was lost with other Eichhoff material in the destruc-

tion of the Hamburg Museum during World War II. Eggers (1929, Wiener Ent. Zgt. 46:51) studied the type, presumably at the Hamburg Museum, and correctly pointed out that Blandford's figure 18 on plate VIII does not closely resemble this species and compared the figure to the characters of the type. Blandford's specimens conform to Eggers' description, but not to the figure.

In the interest of nomenclatorial stability, I propose that the first specimen in Blandford's series of two males from Toxpan, Mexico, presently in the British Museum (Natural History), be designated as the Neotype of *Pterocyclon laterale* Eichhoff, the type-species of *Pterocyclon* Eichhoff. The size, color pattern, posteriorly tapered elytra and armature of the declivity, mentioned in the description, are sufficient to distinguish it from any other known Mexican species. The neotype is slightly darker in color than the original description implies, but this could be expected in a young adult specimen attracted to light. The neotropical genus to which this species properly belongs, *Monarthrum* Kirsch, is large and very poorly known in South America. Since an adequate study of this genus is impractical in the foreseeable future, it is in the interests of nomenclatorial stability that this designation of a neotype be recognized, although there may be some question as to whether this presentation qualifies as a "revisory work."

The males of my series of this species agree in all details with Blandford's specimens. Some of the females agree with the unique female type of *Cosmocorynus trifasciatus* Schedl. Because there is no question of the association of the sexes, it is apparent that the two names represent only the different sexes of the same species and, therefore, *trifasciatus* should be placed in synonymy under the older name *laterale*.

Monarthrum melanura Blandford, n. comb.

Pterocyclon melanura Blandford, 1904, Biol. Centr.-Amer., Coleopt. 4(6):272 (Volcan de Chiriqui, Panama; British Mus. Nat. Hist.).

Pterocyclon opacifrons Schedl, 1935, Revista Ent. 5:350 (Coronado, Costa Rica; Schedl Collection). *New synonymy*.

Blandford's unique male holotype of *malanura* was compared to my male from Tapanti, Cartago Prov., Costa Rica, and found to be identical in all essential characters. The female, taken from the same tunnel as my male, agrees with the unique female holotype of *Pterocyclon opacifrons* Schedl. Since the sexes have now been definitely associated, *opacifrons* must be placed in synonymy under *melanura* Blandford.

Monarthrum scutellare (Leconte)

Corthylus scutellaris Leconte, 1860, Rept. Expl. Surv. R.R. Pacific 9(1):59 (San Jose, California; Mus. Comp. Zool.).

Pterocyclon obliquecaudatum Schedl, 1935, Revista Ent. 5:351 (California; Schedl Collection). *New synonymy*.

It has long been suspected that *obliquecaudatum* Schedl was a synonym of Leconte's *Monarthrum scutellare*, but it wasn't until recently that my specimens were compared to Schedl's type. The error in identification evidently occurred because an authentic male of *scutellare* was not in Schedl's collection; all of his males were under the name of *obliquecaudatum* without an associated female. The name *obliquecaudatum*, therefore, must be placed in synonymy under *scutellare*.

Neodryocoetes limbatus (Eggers), n. comb.

Pseudopityophthorus limbatus Eggers, 1930, Ent. Blätt. 26:169 (Mexico; Schedl Collection).

The type of *limbatus* Eggers was examined and found to be a representative of the genus *Neodryocoetes*, not the genus *Pseudopityophthorus* in which it was originally described.

Pityokteines ornatus (Swaine), n. comb.

Orthotomicus ornatus Swaine, 1916, Canadian Ent. 48:185 (Williams, Arizona; Canadian Nat. Coll.).

Various American species have been referred to the genus *Orthotomicus* without reference to the type-species of that genus or its allies. This occurred with *ornatus* Swaine, although it appears to be more closely allied to *curvidens* Germar, type-species of *Pityokteines* Fuchs, than does any other American species. It is, therefore, proposed that *ornatus* be transferred to *Pityokteines*.

Phloeosinus punctatus Leconte

Phloeosinus punctatus Leconte, 1876, Proc. Amer. Philos. Soc. 15:381 (Oregon; Mus. Comp. Zool.).

Phloeosinus buckhorni Blackman, 1942, Proc. U.S. Nat. Mus. 92:432 (Portland, Oregon; U.S. Nat. Mus.). *New synonymy*

Phloeosinus kaniksu Blackman, 1942, Proc. U.S. Nat. Mus. 92:434 (Metaline Falls, Washington; U.S. Nat. Mus.). *New synonymy*

Phloeosinus rusti Blackman, 1942, Proc. U.S. Nat. Mus. 92:435 (Metaline Falls, Washington; U.S. Nat. Mus.). *New synonymy*.

This is a common and somewhat variable species from California to British Columbia. Blackman described *buckhorni* and *kaniksu* on the basis of characters of the vestiture and of elytral sculpture, and depth of the male frontal excavation, that distinguished them from *punctatus* Leconte. The examination of several hundred specimens revealed that, while many specimens of this species have glabrous elytra, other specimens possess a moderate amount of elytral pubescence some of which is subsquamose in the female. When series were compared to Blackman's paratypes of both *buckhorni* and *kaniksu*, it is apparent that his names refer only to variants of the older name *punctatus*. Male and female paratypes of *rusti* Blackman also fall within the normal range of variation of *punctatus*. The minute characters on which *rusti* was based are not consistent,

even within the type series; therefore, *rusti* must be placed in synonymy under *punctatus*.

Pityophthorus schwerdtfergeri (Schedl), n. comb.

Conophthorus schwerdtfergeri Schedl, 1955, Zeitschr. Angew. Ent. 38:28 (Rancho near Quezaltenango, Guatemala; Schedl Collection).

Pityophthorus islasii Wood, 1962, Gt. Basin Nat. 22:80 (Temascaltepec, Mexico, Mexico; Wood Collection). *New synonymy*.

Conophthocranulus islasii Schedl, 1963, Ent. Arb. Mus. Frey. 14:163 (Temascaltepec, Mexico, Mexico; Schedl Collection). *New synonymy*.

The types of *schwerdtfergeri* Schedl, *islasii* Wood and *islasii* Schedl were all examined; Schedl's types were compared directly to one another and to paratypes of *islasii* Wood. All represent the same species; *islasii* Wood and *islasii* Schedl bear identical locality labels and undoubtedly came from the same original series. The species, although rather large, belongs to Blackman's group V in the genus *Pityophthorus* as is clearly indicated by the male frons, the antennae and other structures.

Poecilips advena Blandford

Coccotrypes advena Blandford, 1894, Trans. Ent. Soc. London, p. 100 (Nagasaki, Japan; British Mus. Nat. Hist.).

Poecilips sannio Schaufuss, 1897, Berliner Ent. Zeitschr. 42:110 (Gabun; location of type uncertain).

Dendurgus philippinensis Eggers, 1923, Zool. Meded. 7:145 (Mt. Makiling, Luzon, Philippine Isl.; Schedl Collection). *New synonymy*.

Schedl (1963, Ent. Abh. Ber. Mus. Tierk. Dresden 28:266; 1964, Reichenbachia 2:217) treated several synonyms of this species under the name *sannio* Schaufuss. Recently the types of *Coccotrypes advena* Blandford and of *Dendurgus philippinensis* Eggers were examined and compared to my specimens from the Philippine Islands, Japan, various Pacific islands, Africa and other areas. The type of *advena* and other Japanese specimens have the declivital interstitial bristles less strongly flattened than do most specimens from other areas; however, they are much more similar to specimens from various Pacific islands, the Philippine Islands, and Indonesia than they are two cotypes of *sannio* and most other African specimens. Most of the African material has the elytral bristles strongly flattened from the elytral base to the declivity and, in addition, those on the elytral declivity are short, scarcely more than half as long as comparable bristles on specimens from other areas. While it is quite evident that geographical races or subspecies may be recognizable, it appears best to treat *sannio* and *philippinensis* as synonyms of *advena* until adequate material is available from more areas in Africa.

Polygraphus rufipennis (Kirby)

Apate (*Lepisomus*) *rufipennis* Kirby, 1837, Fauna Boreali-Americana 4:193 (Lat. 65° in North America; British Mus. Nat. Hist.).

Polygraphus polygraphus: Schedl, 1957, Ann. Mag. Nat. Hist. (12)10:150 (*rufipennis* included as a synonym).

After examining numerous specimens of *rufipennis* Kirby from North America and *polygraphus* Linnaeus from Europe and Asia, Schedl concluded that the two were synonymous. In my examination of numerous specimens from Europe, eastern Russia, and numerous localities in Alaska, Canada and the United States, consistent differences in these forms were apparent that were not mentioned by Schedl. It is readily apparent that the two forms are very similar. However, when series from any European or Asiatic locality are compared to series from any North American locality, the latter have frontal, pronotal and elytral punctures that are consistently larger than punctures from comparable areas on the European or Asiatic material. Occasional specimens are difficult to separate, but most are not.

In the genus *Polygraphus*, specific differences often are minute, at times much more subtle than those referred to above. In view of this and the large distributional areas of both forms where variation within each form is minimal, it appears best to recognize both *polygraphus* and *rufipennis* as valid species.

Pseudothysanoes tresmariae (Schedl), n. comb.

Hylocurus tresmariae Schedl, 1956, Pan-Pacific Ent. 32:32 (Maria Madre, Tres Maria Isl., Mexico; California Acad. Sci.).

Specimens of *tresmariae* Schedl from the type series in the Schedl collection were examined recently and found to represent the genus *Pseudothysanoes*, and not *Hylocurus* as originally assigned.

Pteleobius mundulus (Broun)

Homarus mundulus Broun, 1881, Manual of the New Zealand Coleoptera 2:740 (New Zealand; British Mus. Nat. Hist.).

Acrantus opacus Broun, 1895, Ann. Mag. Nat. Hist. (6)15:417 (New Zealand; British Mus. Nat. Hist.). *New synonymy*

The holotypes of *mundulus* Broun and *opacus* Broun were compared directly to one another. The only apparent difference between the two is size. Since most of the specimens of this species I examined were intermediate in size between the two, although both large and small examples were also present, the two names are considered synonymous with *mundulus* having priority.

Hypothenemus (Stephanoderes) rufescens Hopkins

Stephanoderes rufescens Hopkins, 1915, U.S. Dept. Agr. Rept. 99:29 (Allegheny, Pennsylvania; U.S. Nat. Mus.).

Hypothenemus emarginatus Schedl, 1942, Tijdschr. Ent. 85:11 (Buitenzorg, Java; Schedl Collection). *New synonymy*.

Hopkins described *rufescens* from specimens collected from imported Brazil nuts, *Bertholletia excelsa*, although the host plant was not recorded in the original description. My specimens that were part

of the original series from which Hopkins' type was selected, were compared to specimens from the original series of *emarginatus* Schedl. Since then both types have been examined and the synonymy has been confirmed. The name *rufescens* has priority and should, therefore, be used to designate this species.

Scolytus tsugae (Swaine)

Eccoptogaster tsugae Swaine, 1917, Dom. Canada Dept. Agric. Ent. Br. Tech. Bull. 14(1):32 (Cherry Ck., Vernon District, B.C.; Canadian Nat. Coll.).

Eccoptogaster monticolae Swaine, 1917, Dom. Canada Dept. Agric. Ent. Br. Tech. Bull. 14(1):32 (Arrowhead, B.C.; Canadian Nat. Coll.). *New synonymy*.

The types of *tsugae* Swaine and *monticolae* Swaine differ slightly in the appearance of the surface of the abdominal sterna. This surface is dull in the former and shiny in the latter type. Because of the difficulty in obtaining adequate material from the type localities, and because of variability in the supposedly diagnostic character, the validity of the two forms has not been questioned. However, both types as well as series from both type localities have now been studied along with several other series from British Columbia. It now appears reasonably certain that only one species in this species complex exists in British Columbia and that *monticolae* should be placed in synonymy under *tsugae* because of page priority.

Scolytus unispinosus Leconte

Scolytus unispinosus Leconte, 1876, Proc. Amer. Philos. Soc. 15:372 (Oregon; Mus. Comp. Zool.)

Scolytus sobrinus Blackman, 1934, U.S. Dept. Agric. Tech. Bull. 431:23 (Kent, Washington; U.S. Nat. Mus.). *New synonymy*.

Several hundred specimens of this species, including Blackman's type series of *sobrinus*, have been examined. The characters on which *sobrinus* was based are far less conspicuous than Blackman's key and description might suggest. It appears that the variation he described represents only a local population that intergrades with several other equally indistinct local populations from Oregon and Washington. In the absence of any biological or consistent anatomical characters to distinguish *sobrinus*, it should be placed in synonymy under the older name *unispinosus*.

Tricolus nodifer Blandford

Tricolus nodifer Blandford, 1905, Biol. Centr.-Amer., Coleopt. 4(6):287 (Miran-dilla, Guatemala; British Mus. Nat. Hist.).

Tricolus triarmatus Schedl, 1939, Mitt. Münchner Ent. Ges. 29:578 (Colonia, Mexico; Schedl Collection). *New synonymy*.

The types of both *nodifer* Blandford and *triarmatus* Schedl were examined and were compared directly to my specimens from Teziutlan, Puebla, Mexico, with which they agree in all characters. The name *triarmatus* should, therefore, be placed in synonymy under the older name *nodifer*.

Xyleborus capucinus Eichhoff

Xyleborus capucinus Eichhoff, 1868, Berliner Ent. Zeitschr. 12:281 (Guadeloupe; evidently in Chapuis Collection, Paris Mus.).

Dryocoetoides guatemalensis Hopkins, 1915, U.S. Dept. Agric. Rept. 99:52 (Livingston, Guatemala; U.S. Nat. Mus.). *New synonymy*

Xyleborus capucinoides Eggers, 1941, Arb. Morph. Tax. Ent. Berlin-Dahlem 8:104 (Guadeloupe; U.S. Nat. Mus.).

My female of *guatemalensis* Hopkins from Teziutlan, Puebla, Mexico, that was compared to the female holotype was also compared to Blandford's (1898 Biol. Centr.-Amer., Coleopt. 4[6]:203) four females he had compared to the type of *capucinus* Eichhoff. Since they are obviously identical, the type of *Xyleborus villosulus* Blandford (op. cit., p. 204) was examined to determine its status because Schedl (1952, Ent. Blätt. 47-48:161) had treated *guatemalensis* and *villosulus* as synonyms. The inflated and posteriorly tuberculate front tibiae and the characters of the elytral striae and vestiture of *capucinus* are entirely different from those of *villosulus*. Based on these studies, *guatemalensis* must be placed in synonymy under the older name *capucinus*, and *villosulus* is a distinctly different species.

Apparently all specimens of *capucinus* in the Schedl collection were included under the name *capucinoides* Eggers. Based on the comparison of my material with a cotype of *capucinoides*, Eggers species must also be treated as a synonym of *capucinus*.

Xyleborus coartatus Sampson

Xyleborus coartatus Sampson, 1921, Ann. Mag. Nat. Hist. (9)7:32 (Trinidad; British Mus. Nat. Hist.).

Xyleborus artecuneolus Schedl, 1939, Proc. Roy. Ent. Soc. London, 8:14 (Trinidad; British Mus. Nat. Hist.). *New synonymy*.

The female holotypes of *coartatus* Sampson and *artecuneolus* Schedl were compared directly to one another. Not only are the types identical, but they were both collected in Trinidad by F. W. Urich from cacao (*Theobroma*) in 1914. The name *artecuneolus* must be placed in synonymy under the older name *coartatus*.

Xyleborus intersetosus Blandford

Xyleborus intersetosus Blandford, 1898, Biol. Centr.-Amer., Colept. 4(6):211 (Tamahu, Vera Paz, Guatemala; British Mus. Nat. Hist.).

Xyleborus analogus Schedl, 1949, Rev. Brasileira Biol. 9:277 (Mexico; Schedl Collection). *New synonymy*.

The female holotypes of *intersetosus* Blandford and *analogus* Schedl were both compared directly to my female specimen from El Hato del Volcan, Chiriqui Prov., Panama, and were found to be identical. The older name *intersetosus* has priority over *analogus* and should be used to designate the species. It appears to be a relatively common species from Mexico to Panama.

Xyleborus obliquus Sharp

Xyleborus obliquus Sharp, 1885, Trans. Roy. Dublin Soc. (2)3:192 (Hawaii; British Mus. Nat. Hist.).

Xyleborus tantalus Schedl, 1941, Proc. Hawaiian Ent. Soc. 11:114 (Tantalus, Oahu; British Mus. Nat. Hist. and Schedl Collection). *New synonymy*.

Sharp's type of *obliquus* and several specimens collected with the type series of *tantalus* Schedl, including types and cotypes, were compared directly to one another. Although some variation is apparent it is clear that only one species is represented; consequently, *tantalus* must be placed in synonymy under the older name *obliquus*.

Xyleborus spinulosus Blandford

Xyleborus spinulosus Blandford, 1898, Biol. Centr.-Amer., Coleopt. 4(6):201 (San Gerónimo, Guatemala; British Mus. Nat. Hist.).

Xyleborus spinosulus Schedl, 1934, Stylops 3:178 (Hawaii; F. C. Hadden Collection?).

The cotypes of *spinosulus* in the Schedl collection and my series from Hawaii agree in size and all structural details with many of my specimens of this common species from Costa Rica. The larger type of *spinulosus* Schedl differs slightly from that of *spinosulus*, but is identical with many other specimens from Costa Rica. The principal differences between the two forms, as represented by the types, are body size and the relative sizes of three pair of spines on the elytral declivity. The length of the *spinulosus* form is about 2.4 mm. and the principal lateral spine near the middle of the declivity is larger, the two lateral sabapical spines are both relatively small. The length of the *spinosulus* form is about 2.0 mm. and the lateral pair of the two subapical spines is conspicuously larger than the other two. Within some series there is little deviation from these forms; however, in other series taken from the same tree branch both forms occur in any intermediate size and, in addition, other equally distinct forms exhibiting other size arrangements of the spines may be present. At times these new forms also occur in uniform series. Because of the variability of the forms, these long series clearly indicate that only one species is represented; therefore, *spinosulus* must be treated as a synonym of the older name *spinulosus*.

Xyleborus vulcanus Perkins

Xyleborus truncatus Sharp, 1885, Trans. Roy. Dublin Soc. (2)3:192 (Hawaii; British Mus. Nat. Hist.). *Preoccupied*.

Xyleborus vulcanus Perkins, 1900, Fauna Hawaiensis 2:179 (Kilauea, Hawaii, Hawaiian Isl.; British Mus. Nat. Hist.).

Xyleborus adpersus Schedl, 1958, Tijdschr. Ent. 101:152 (new name for *truncatus* Sharp).

Xyleborus pacificus Nunberg, 1959, Beitr. Ent. 9:432 (new name for *truncatus* Sharp).

Several series of this species have been collected in which males and females were definitely associated together. Females of one of

these series were compared directly to Sharp's female type of *truncatus* and found to agree in all essential characters. The very different male is not represented in Sharp's material; however, it does agree in all details with the unique male holotype of *vulcanus* Perkins when compared directly. Because Sharp's name is pre-occupied by *truncatus* Erichson (1836) the name *vulcanus* must be used. The more recent replacement names *adpersus* Schedl and *pacificus* Nunberg are junior synonyms.

Xylosandrus zimmermanni (Hopkins), n. comb.

Anisandrus zimmermanni Hopkins, 1915, U.S. Dept. Agric. Rept. 99:68 (Biscayne, Florida: U.S. Nat. Mus.).

Xyleborus biseriatus Schedl, 1963, Reichenbachia 1:226 (Nova Teutonia, Sta. Cat., Brazil: Schedl Collection). *New synonymy*.

Representatives of my series from Sebring, Florida, were compared directly to the holotype of *zimmermanni* Hopkins and were found to be identical in all respects. One of these female specimens was also compared directly to Schedl's type of *biseriatus* and was found to represent the same species. The name *biseriatus* must, therefore, be treated as a synonym of the older name *zimmermanni*. Allied species, including *biseriatus*, have correctly been placed in the genus *Xylosandrus*.

In addition to published records I have collected this species at the following localities: Tecolutla, Vera Cruz, Mexico; Rodeo and Volcan de Agua, Esquintla Prov., Guatemala; Zamorano, Honduras; and Pandora, Limon Prov., and Santa Ana, San José Prov., Costa Rica.