

NEW SYNONYMY AND NEW SPECIES OF BARK BEETLES (COLEOPTERA: SCOLYTIDAE)

Stephen L. Wood¹

ABSTRACT.—New synonymy in Scolytidae is proposed as follows: *Camptocerus opacicolis* (Eggers) (= *Camptocerus aquilus* Wood), *Cladoctonus corumbensis* (Eggers) (= *Hoplitophthorus bolivianus* Wood), *Cladoctonus interruptus* (Eggers) (= *Hoplitophthorus sentus* Wood), *Cnemonyx errans* (Blandford) (= *Ceratolepis barbatus* Schedl), *Cnemonyx flavicornis* (Chapuis) (= *Cnemonyx cianai* Schedl), *Cnesinus dividius* Schedl (= *Cnesinus dryographus* Schedl, *Cnesinus laevicollis* Schedl), *Cryptocurus spinipennis* Schedl (= *Hyloperus caudatus* Browne, *Hyloperus bicornis* Browne), *Dendrosinus ater* Eggers (= *Dendrosinus hirsutus* Schedl), *Hylesinus aculeatus* Say (= *Hylesinus imperialis* Eichhoff), *Hylesinus cordipennis* Lea (= *Hylesinus papuanus* Eggers), *Hylesinus macmahoni* (Stebbing) (= *Hylesinus alternans* Schedl, *Leperisinus fraxinoides* Beeson, *Leperisinus fraxinoides* Schedl), *Hylesinus niligrinus* Eggers (= *Trogloditica robusta* Schedl), *Phloeosinusopoides triseriatus* (Schedl) (= *Xylechinus papuanus* Schedl), *Phloeotribus scarabaeoides* (Bernard) (= *Phloeotribus americanus* Dejean), *Scolytogenes darwini* Eichhoff (= *Nigritus similis* Eggers, *Nigritus major* Eggers, *Scolytogenes cryptolepis* Schedl), *Scolytodes notatus* Eggers (= *Hexacolus pseudobicolor* Eggers, *Hexacolus subparallelus* Eggers, *Hexacolus pelicerinus* Schedl), *Scolytopsis puncticollis* Blandford (= *Scolytopsis argentinensis* Schedl, *Scolytus bruchi* Schedl, *Scolytopsis toba* Wichmann), *Tomicus piniperda* (Linnaeus) (= *Blastophagus khasianus* Murayama), *Xylechinus spathifer* Schedl (= *Pteleobius lomatae* Schedl). Species new to science are described as *Acanthotomicus ipsimorphus* (Costa Rica), *Acrantus opimus* (Indonesian New Guinea), *Bothrostermus hirsutus* (Venezuela), *Cnesinus discretus* (Venezuela), *Cnesinus minor* (Costa Rica), *Corthylus truncatus* (Peru), *Hylurgus indicus* (India), *Pachycotes minor* (Australia), *Phloeosinusopoides pumilus* (Papua New Guinea), *Xylechinusomus pilosus* (Brazil).

During the past several years, a world revision of the genera of Scolytidae has been in preparation. While conducting that study, I have had the opportunity to visit several museums for the purpose of studying type material. This led to the discovery of a number of synonyms and to the detection of several species new to science. The above abstract summarizes 29 cases of synonymy from all parts of the world and lists the names and country of origin for 10 previously unnamed species. The new species represent 9 different genera and come from Australia (1), Brazil (1), Costa Rica (2), India (1), New Guinea (2), Peru (1), and Venezuela (2).

Of special interest to American students is conclusive placement in synonymy of *Hylesinus imperialis* Eichhoff and of the nomen nudum, *Phloeotribus americanus* Dejean.

NEW SYNONYMY

Camptocerus opacicolis (Eggers)

Loganius opacicolis Eggers, 1929, Wiener Ent. Zeit. 46:61 (Holotype, male; Ostholivia; Eggers Coll., apparently on loan to Wien Nat. Mus.)

Camptocerus aquilus Wood, 1972, Bull. Ent. Res. 62:244 (Holotype, male; 12° 49' S 51° W, Brazil; British Mus. Nat. Hist.). *New synonymy*

The male holotype of *Loganius opacicolis* Eggers was deposited in the Eggers Collection, but it never reached the U.S. National Museum with the Eggers Collection. It was found in Schedl material at the Wien Museum and was compared to a male paratype of *Camptocerus aquilus* Wood. Only one species is represented by this material. For this reason, the junior name is placed in synonymy as indicated above.

Cladoctonus corumbensis (Eggers)

Hoplites corumbensis Eggers, 1950, Ent. Blatt. 45-46:149. (Holotype: Corumba, Matto Grosso, Brazil; Eggers Collection, apparently on loan to Wien Nat. Mus.)

Hoplitophthorus bolivianus Wood, 1961, Great Basin Nat. 21:106 (Holotype, female; Route between Boyuilbe and Charagua via Cueva, Ingri, etc. Bolivia; U.S. Nat. Mus.). *New synonymy*

Because the holotype of *Hoplites corumbensis* Eggers was missing from the Eggers Collection at the U.S. National Museum, it could not be compared to species sub-

¹Life Science Museum and Department of Zoology, Brigham Young University, Provo, Utah 84602.

sequently named in this genus. When it was found in Schedl material at Wien, it was compared to paratypes of *Hoplitophthorus boliviae* Wood and found to be identical. For this reason, the name *bolivianus* must be placed in synonymy as indicated above.

Cladoctonus interruptus (Eggers)

Hoplitus interruptus Eggers, 1940, Arb. morph. taxon. Ent. 7:126 (Holotype; Guadeloupe; Fleutiaux Coll.)

Hoplitophthorus sentus Wood, 1961, Great Basin Nat. 21:3 (Holotype, female; La Cuchilla, Sevilla, Colombia; Wood Coll.). *New synonymy*

A male cotype of *Hoplitus interruptus* Eggers was found among the Schedl material at Wien and was compared directly to a male paratype of *Hoplitophthorus sentus* Wood. The two specimens represent the same species. For this reason the name *sentus* is placed in synonymy as indicated above.

Cnemonyx errans (Blandford)

Ceratolepis errans Blandford, 1896, Biol. Centr. Amer., Coleopt. 4(6):127 (Lectotype, male; in "Mexican" tobacco refuse; British Mus. Nat. Hist., designated by Wood, 1972, Great Basin Nat. 32:19)

Ceratolepis barbatus Schedl, 1954, Dusemia 5:24 (Holotype, male; Nova Teutonia, Brazil; Wien Nat. Mus.). *New synonymy*

The holotype of *Ceratolepis barbatus* Schedl was examined and compared directly to my homotypes *C. errans* Blandford. Because only one species is represented by this material, Schedl's name is placed in synonymy as indicated above.

Cnemonyx flavicornis (Chapuis)

Loganius flavicornis Chapuis, 1869, Synopsis des Scolytides, p. 53 (Two syntypes; Cumana; Brussels Mus.)

Cnemonyx cianai Schedl, 1950, Acta Zool. Lilloana 9:289 (Holotype; Valle Hermoso, Dep. Punilla, Cordoba, Argentina; Wien Nat. Mus.). *New synonymy*

The type and two paratypes of *Cnemonyx cianai* Schedl in the Schedl material at Wien were placed by Schedl as a synonym of *Loganius flavicornis* Chapuis, but this was apparently never published. Because I have examined both syntypes of *flavicornis* and the Schedl holotype, I concur with his decision and place Schedl's name in synonymy as indicated above.

Cnesinus dividius Schedl

Cnesinus dividius Schedl, 1938, Rev. Soc. Ent. Argentina 10:22 (Lectotype, female; Tigre, Buenos Aires, Argentina; Wien Nat. Mus., present designation)

Cnesinus dryographus Schedl, 1951, Dusenian 2:78 (Lectotype, female; Nova Teutonia, Brasil; Wien Nat. Mus., present designation). *New synonymy*

Cnesinus laevicollis Schedl, 1951, Dusenian 2:79 (Lectotype, female; Nova Teutonia, Santa Catarina, Brasil; Wien Nat. Mus., present designation). *New synonymy*

The "holotypes" cited by Schedl (1979) for his species *Cnesinus dividius*, *C. dryographus*, and *laevicollis* are all of the same sex and all are syntypes. As indicated above, I here designate those "holotypes" as lectotypes of *dividius*, *dryographus*, and *laevicollis* respectively. They were compared directly to one another and to my series from Nova Teutonia and were found to represent the same species. The two junior names must, therefore, be placed in synonymy as indicated above. It was a common practice of Schedl to designate male and female "holotypes," one of each for his collection and one of each for the collection of institutions submitting the specimens for identification. Hence, the confusion of "holotypes."

Cryptocurus spinipennis Schedl

Cryptocurus spinipennis Schedl, 1957, Ann. Mag. Nat. Hist. (12) 10:870 (Holotype, male; Moshi district, Tanganyika; British Mus. Nat. Hist.)

Hyloperus caudatus Browne, 1970, J. Nat. Hist. 4:547 (Holotype, male; Gyl Nyaki, Mambilla Plateau, Nigeria; British Mus. Nat. Hist.). *New synonymy*

Hyloperus bicornis Browne, 1970, J. Nat. Hist. 4:546 (Holotype, female; Gyl Nyaki, Mambilla Plateau, Nigeria, British Mus. Nat. Hist.). *New synonymy*

The male holotypes of *Cryptocurus spinipennis* Schedl and *Hyloperus caudatus* Browne were compared directly to one another and obviously are the same species. The female paratypes of *spinipennis* in the Schedl collection were compared directly to female paratypes of *H. bicornis* Browne and my paratypes to the holotype of *bicornis*. The females are identical. Schedl's series was taken from the host, apparently from the same tunnels, and appears to indicate an accurate association of the sexes. If this is correct, both of Browne's species are junior synonyms of Schedl's name and are placed in synonymy as indicated above.

Dendrosinus ater Eggers

Dendrosinus ater Eggers, 1930, Ent. Blätt. 26:167 (Holotype, male; Ostbolivia; U.S. Nat. Mus.)

Dendrosinus hirsutus Schedl, 1958, Acta Zool. Lilloana 16:38 (Lectotype, female; Santa Fe, Dep. Garay Maclas, Argentina; Wien Nat. Mus., present designation). *New synonymy*

The description of *Dendrosinus hirsutus* Schedl is composite. Because of this the "holotype" cited by Schedl (1979:117) is here designated as the lectotype of this species. This lectotype is a specimen of *D. ater* Eggers in which the elytral setae are not fully colored and appear pale. For this reason, Schedl's name must be placed in synonymy as indicated above.

Hylesinus aculeatus Say

Hylesinus aculeatus Say, 1824, J. Acad. Nat. Sci. Philadelphia 3:322 (Syntypes; Missouri; apparently lost).

Hylesinus imperialis Eichhoff, 1868, Berliner Ent. Zeitschr. 12:149 (Syntypes; Wisconsin, Georgia; 1 male labeled Amer. Bor., Ulke Coll. is probably a cotype, labeled "holotype" by Schedl; Wien Nat. Mus.). *New synonymy*

The male of *Hylesinus imperialis* Eichhoff in the Schedl collection and labeled by him as the holotype appears to be an Eichhoff specimen obtained by Schedl during World War II from the Stettin Museum. Since other Stettin Museum specimens of Eichhoff now in the Schedl collection appear to be authentic, I see no reason to doubt the authenticity of this specimen. However, it should be cited as a lectotype, not as a holotype. This specimen now makes it possible to remove all doubt from its placement as a synonym of *aculeatus* as indicated above.

Hylesinus cordipennis Lea

Hylesinus cordipennis Lea, 1910, Proc. Roy. Soc. Victoria, n.s., 22:144 (Syntypes; Cairns, Queensland, Australia; one syntype Wien Nat. Mus.)

Hylesinus papuanus Eggers, 1923, Zool. Meded. 7:133 (Lectotype, male; Insel Yule bei Neu Guinea; Wien Nat. Mus.). *New synonymy*

A female syntype of *Hylesinus cordipennis* Lea in the Wien Museum and the male lectotype of *H. papuanus* Eggers were compared directly to my series from Bulolo, New Guinea. These specimens all represent the same species. If the Schedl syntype actually does represent Lea's species, then the name

papuanus must be placed in synonymy as indicated above.

Hylesinus macmahoni (Stebbing)

Sphaerotrypes macmahoni Stebbing, 1909, Indian For. Mem., Zool. Ser. 1(2):16 (Two syntypes; Sangar Scallon, near Takt-i-Suliman Mountain, 7,000 ft., Baluchistan, Pakistan; Forest Research Institute, Dehra Dun)

Hylesinus alternans Schedl, 1959, Indian For. Rec., n.s., Entomology 9(8):172 (Holotype, male; Rawalpindi, Punjab, India; Wien Nat. Mus.). *New synonymy*

Leperisus fraxinoides Beeson, 1941, Ecology and Control of the Forest Insects of India, p. 287. *Nomen nudum*

Leperisus fraxinoides Schedl, 1959, Indian For. Rec., Entomology 10(2):39 (Paratype, female; Lolab, Putshai, Kashmir, India; Wien Nat. Mus.). *New synonymy*

Two cotypes of *Sphaerotrypes macmahoni* Stebbing, the male holotype of *Hylesinus alternans* Schedl, a female paratype of *Leperisus fraxinoides* Schedl, and 25 other specimens from the Indian states of Jammu, Kashmir, and Punjab were examined. It is quite clear that only one species is represented, although the sexual dimorphism is more conspicuous than in most members of this genus. None of the Indian specimens reported by Schedl to have been returned to the Forest Research Institute ever reached their destination. In fact, the available evidence indicates that they were never mailed and still reside in the Schedl Collection at Wien. Consequently, the "missing" holotype of *fraxinoides* probably never existed and is represented only by the paratype cited above. Whatever that situation might be, it is clear that both of Schedl's names must be placed in synonymy as indicated above.

Hylesinus niligrinus Eggers

Hylesinus niligrinus Eggers, 1923, Zool. Meded. 7:133 (Holotype; Nilgiri Hills, Ostindien; lost with Hamburg Mus.)

Trogloditica robusta Schedl, 1975, Rev. Suisse Zool. 82:453 (Holotype; Nilgiri, Madras, India; Mus. Hist. Nat. Geneve). *New synonymy*

Paratypes of *Trogloditica robusta* Schedl in the Schedl Collection (Wien Nat. Mus.) are identical to 12 specimens from southern India and more than 100 from Sri Lanka that I recognize as *Hylesinus niligrinus* Eggers (= *persimilis* Eggers 1927). This species fits the

Eggers description in every detail, and it is the only known Indian species that is even remotely similar to it. Schedl's name, therefore, must be placed in synonymy as indicated above.

Phloeosinopsoides triseriatus (Schedl)

Phloeosinopsis triseriatus Schedl, 1964, Tijdschr. Ent. 107:297 (Holotype, female; Sumba-Insel; Schedl Coll.)

Xylechinus papuanus Schedl, 1970, Proc. Linn. Soc. New South Wales 94(2):128 (Holotype, male; Long Island, L.A. Bulolo, Morobe district; CSIRO Coll., Canberra). *New synonymy*

The female holotype of *Phloeosinopsis triseriatus* Schedl was compared directly to the male paratype of *Xylechinus papuanus* Schedl in the Schedl material at Wien and to a pair of this species from Bulolo, New Guinea, in my collection. All represent the same species.

Phloeotribus scarabaeoides (Bernard)

Scolytus scarabaeoides Bernard, 1788, Mem. Hist. Nat. Provence 6:271 (Syntypes?; France; lost. Neotype, female; Galliae meridionalis in *Olea*; Kiel part of Copenhagen Fabricius Coll., designated by Wood, 1975, Bull. Zool. Nomencl. 32:122)

Phloeotribus americanus Dejean, 1837, Cat. Coleopt., ed. 3, p. 331 (Amer. bor.; nomen nudum)

Although the name *Phloeotribus americanus* Dejean, nomen nudum, has been cited in the literature on several occasions, efforts to locate the specimen on which Dejean's name was based were fruitless until I found it in the Wien Museum (original collection, not part of the Schedl material). It is labeled "Amer. bor., *Phloeotribus americanus* Dej." It is an incorrectly labeled specimen of *P. scarabaeoides* apparently from southern Europe and is not part of the American fauna.

Scolytogenes darwini Eichhoff

Scolytogenes darwini Eichhoff, 1878, Mem. Soc. Roy. Sci. Liege (2) 8:497 Stettiner Ent. Zeit. 39:387 (Holotype; Hindostan, "Birma" on type; Wien Nat. Mus.)

Nigritus similis Eggers, 1923, Zool. Meded. 7:142 (Lectotype; Java; U.S. Nat. Mus., designated by Anderson and Anderson, 1971, Smithsonian Contrib. Zool. 94:30). *New synonymy*

Nigritus major Eggers, 1927, Philippine J. Sci. 33:69 (Lectotype; Surigao, Mindanao, Philippines; U.S. Nat. Mus.) *New synonymy*

Scolytogenes cryptolepis Schedl, 1951, Tijdschr. Ent. 93:55 (Holotype; Nakronda, Dehra Dun, Uttar Pradesh, India; Wien Nat. Mus.). *New synonymy*

The holotypes of *Scolytogenes darwini* Eichhoff and *S. cryptolepis* Schedl and cotypes of *Nigritus similis* Eggers were compared directly to one another and to my specimens. My specimens were also compared directly to the lectotypes of *N. major* Eggers and *N. similis*. All represent the same, common, widely distributed species. It occurs in vines from India and Sri Lanka to the Philippines and northern Australia.

Scolytodes notatus (Eggers)

Hexacolus notatus Eggers, 1940, Arb. Morph. Taxon. Ent. Berlin-Dahlem 7:133 (Holotype, male; Trois Rivières, Guadeloupe; "Eggers Coll.")

Hexacolus pseudobicolor Eggers, 1940, Arb. Morph. Taxon. Ent. Berlin-Dahlem 7:132 (Holotype, male; Trois Rivières, Guadeloupe; U.S. Nat. Mus.). *New synonymy*

Hexacolus subparallelus Eggers, 1940, Arb. Morph. Taxon. Ent. Berlin-Dahlem 7:134 (Holotype, Trois Rivières, Guadeloupe; Fleutiaux Collection). *New synonymy*

Hexacolus pelicerinus Schedl, 1952, Dusenja 3:358 (Holotype, male; Mexico?; Wien Nat. Mus.). *New synonymy*

Paratypes (or cotypes) of *Hexacolus notatus* Eggers, *H. pseudobicolor* Eggers, and *H. subparallelus* Eggers, and the holotype of *H. pelicerinus* Schedl in the Schedl Collection (Wien Nat. Mus.) were examined and compared directly to one another. All represent the same common Caribbean species.

Scolytopsis puncticollis Blandford

Scolytopsis puncticollis Blandford, 1896, Biol. Centr. Amer., Coleopt. 4(6):123 (Syntypes; Guatemala; British Mus. Nat. Hist.)

Scolytopsis argentinensis Schedl, 1937, Rev. de Ent. 7:84 (Lectotype, female; Prov. Tucuman, Argentina; Wien Nat. Mus., designated by Schedl, 1979, Kat. wiss. Samml. Nat. Mus. Wien. Ent. 2:25). *New synonymy*

Scolytus bruchi Schedl, 1939, Not. Mus. La Plata 4:170 (Lectotype, male; Misiones orillas del Ignazu, Argentina; Wien Nat. Mus., designated by Schedl 1979:48). *New synonymy*

Scolytopsis toba Wichmann, 1914, Ent. Blätt. 10:136 (Holotype; Santa Sofia, Paraguay; Nat. Mus. Wien). *New synonymy*

The holotype of *Scolytopsis toba* Wichmann and the lectotypes of *S. argentinensis* Schedl and *S. bruchi* Schedl, and a pair of my

homotypes of *S. puncticollis* Blandford were all compared directly to one another. Because only one species is represented by this material, the Schedl and Wichmann names are placed in synonymy as indicated above.

Tomicus piniperda (Linnaeus)

Dermestes piniperda Linnaeus, 1758, Systema Naturae, ed. 10, p. 355 (Syntypes; Europae; presumably at Uppsala).

Blastophagus khasianus Murayama, 1959, Bull. Brooklyn Ent. Soc. 54:75 (Holotype, Shillong, Assam, India; U.S. Nat. Mus.). *New synonymy*

Murayama named *Blastophagus khasianus* from a specimen in poor condition that came from a long series taken by C. F. C. Beeson. After examining the Murayama type, the entire series of Beeson at the Forest Research Institute, and long series from other parts of Asia and from Europe, it is apparent that *khasianus* represents a very minor variation that does not warrant either specific or sub-specific status.

Xylechinus spathifer Schedl

Xylechinus spathifer Schedl, 1955, Rev. Chil. Ent. 4:256 (Lectotype; Laguna de Malleco, Pemehne, Chile; Wien Nat. Mus., present designation)

Pteleobius lomatae Schedl, 1975, Stud. Neotrop. Fauna 10:2 (Holotype, male; Nahuel Huapi National Park, Argentina; Wien Nat. Mus.). *New synonymy*

The description of *Xylechinus spathifer* Schedl is composite. The specimen cited by Schedl (1979:233) as the "holotype" and labeled holotype in the Schedl collection is here designated as the lectotype of this species. This lectotype and the holotype of *Pteleobius lomatae* Schedl were compared directly to one another and were found to represent the same species. The junior name is placed in synonymy as indicated above.

NEW TAXA

Acanthotomicus ipsiformus, n. sp.

This species is distinguished from *mimicus* (Schedl) by the slightly larger, stouter body form, by the sculpture of the frons as described below, by the coarser, closer elytral punctures, and by the deeper, coarser, more *Ips*-like elytral declivity.

MALE.—Length 2.2 mm (paratypes 2.2–2.3 mm), 2.8 times as long as wide; color reddish brown.

Frons resembling *mimicus* except lower half of frons much more strongly, transversely impressed, upper half less strongly convex; surface more nearly rugose, with rather numerous, coarse, isolated granules. Vestiture similar but coarser.

Pronotum 1.1 times as long as wide; similar to *mimicus* except asperities slightly smaller, punctures on posterior half slightly smaller, not as deep.

Elytra 1.4 times as long as wide; similar to *mimicus* except stria and interstria punctures slightly smaller, deeper, much closer, usually somewhat confused near base particularly near suture. Declivity not quite as steep, more deeply impressed, as in 4-spined *Ips*; punctures on striae 1 and 2 mostly in rows, others confused; margin armed by four denticles positioned exactly as in *mimicus* but considerably larger, 4 pointed, and about twice as large as 3; lower margin from denticle 4 to suture acutely, moderately explanate, with crest undulating to form three indefinite cusps somewhat resembling those of some *Orthotomicus*. Vestiture as *mimicus* except slightly finer.

Antennal sutures procurved as in *mimicus* and many other *Acanthotomicus* and rather similar to *Ips concinnus* (Mannerheim) and *mexicanus* (Hopkins) of North America.

TYPE LOCALITY.—Santa Rosa National Park, Guanacaste, Costa Rica.

TYPE MATERIAL.—The male holotype and two male paratypes were taken at the type locality in 1982, by George Stevens. The host was not recorded but could have been *Spondias mombin*. A male and a female from Bahia, Brazil could be this species but are excluded from the type series.

The holotype and paratype are in my collection.

This species, supported by *mimicus*, is remarkable in that it represents the closest structural approach to the *Ips*-*Orthotomicus* group yet found and greatly increases the probability of a neotropical origin of this segment of the Ipini.

Acrantus opimus, n. sp.

Recent literature treating the genus *Acrantus* is chaotic. Representatives of an assemblage of species from three or more genera

have been thrown together with little or no thought given to basic characters, and a majority of the species that actually belong here currently reside in still other, unrelated genera. Among material at hand, the species described here appears allied to *mundulus* Brown, although the relationship is not close. It is distinguished from *mundulus* by the larger size and by numerous other characters cited below.

MALE.—Length 2.9 mm, 2.2 times as long as wide; color very dark brown, vestiture pale.

Frons shallowly, broadly concave on about central third, gradually transcending to flattened or feebly convex on surrounding areas; surface mostly smooth, brightly shining, becoming subreticulate toward vertex, punctures moderately abundant, rather small, shallow but distinct, much smaller in concave area. Vestiture absent, apparently abraded (a few short, erect, scalelike setae on one side.)

Pronotum 0.84 times as long as wide; outline about as in *mundulus* except transverse impression on anterior fourth stronger; surface shining, punctures shallow, of moderate size, dense, running into one another, margins of a few in lateral areas subcrenulate. Vestiture mostly abraded, of erect, short, stout, almost scalelike setae.

Elytra 1.4 times as long as wide; sides almost straight on basal two-thirds, broadly rounded behind; crenulations on bases small, narrow, distinct, about 13 on each elytron; striae narrowly, distinctly impressed, punctures deep, close; interstriae about twice as wide as striae, convex, covered by resin but apparently shining, almost smooth, with minute, confused punctures, each with numerous confused, narrow, sharp crenulations (each equal to one-fourth width of an interstriae), these transcend into uniseriate tubercles at base of declivity. Declivity steep, convex; interstriae narrower than on disc, with fine, uniseriate rows of tubercles at base, these reduced and almost obsolete toward apex. Vestiture of abundant, erect, small scales in ground cover; each interstriae with a row of longer erect scales, each four times as long as ground scales, about six times as long as wide.

TYPE LOCALITY.—Pak Pak on south coast of Bombarai, Vogelkop, Dutch New Guinea.

TYPE MATERIAL.—The male holotype was taken at the type locality on 4-VI-1959, between 100 and 700 m.

The holotype is in my collection.

Bothrosternus hirsutus, n. sp.

This species is distinguished from *truncatus* Eichhoff by the finer, much longer elytral setae, and by differences in the pronotal and elytral sculpture cited below.

MALE.—Length 2.3 mm (paratypes 2.2–2.5 mm), 2.1 times as long as wide; color dark brown to almost black.

Frons about as in *truncatus* except upper area less strongly convex, glabrous on a small area less than one-fourth as extensive; most of surface granulate-reticulate.

Pronotum very similar to *truncatus* except more finely, closely aciculate, grooves much longer, not as deep; rather dull. Vestiture finer, more abundant.

Elytra similar in outline to *truncatus*; striae more abruptly impressed, punctures almost obsolete, strongly reticulate; interstriae three times as wide as striae, strongly reticulate, shallow, obscure punctures mostly on margins. Declivity rather steep, broadly convex, about as in *truncatus*. Vestiture of fine, striae and interstriae hair, moderately abundant, longest setae near base of declivity equal in length to twice width of an interstriae; somewhat shorter on lower half of declivity. Proepisternal pubescent area large, setae white (in both sexes).

FEMALE.—Similar to male except epistoma bearing a transverse, subcarinate elevation as in *truncatus*; glabrous area on upper frons about half as large as in *truncatus* and less strongly convex.

TYPE LOCALITY.—Rancho Grande, Aragua, Venezuela.

TYPE MATERIAL.—The male holotype, female allotype, and 10 paratypes were taken at the type locality 9-IV-1970, 1100 m. No. 429, *Serjania*, by me. Eleven paratypes bear the same data labels except for collection No. 420, taken from *Tabebuia* twigs.

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

Cnesinus discretus, n. sp.

This species (male) is distinguished from *nitidus* Eggers (male homotype) by the

stronger epistomal impression, with the upper, convex area of the frons more coarsely sculptured, by the more strongly impressed and more closely punctured discal striae, and by other characters.

MALE.—Length 2.2 mm, 3.1 times as long as wide; color very dark brown, elytra reddish brown.

Frons as in *nitidus* except lower third of frontal area more strongly, transversely impressed; surface rather coarsely granulate, some granules at summit of convexity forming an obscure, indefinite, irregular carina.

Pronotum as in *nitidus*, punctures slightly closer and a bit more longitudinally strigose.

Elytra as in *nitidus* except discal striae very slightly more strongly impressed, many punctures confluent (never confluent in *nitidus*); declivital interstriae 2 less strongly reduced in width, tubercles on its upper half much smaller.

TYPE LOCALITY.—Rancho Grande, Aragua, Venezuela.

TYPE MATERIAL.—The male holotype was taken at the type locality on 9-IV-1970, 1100 m, from the broken twig of an unidentified tree, by me.

The holotype is in my collection.

Cnesinus minor, n. sp.

This species is distinguished from *electinus* Wood by the much smaller size, by the different sculpture of the female frons as described below, and by other differences cited below.

FEMALE.—Length 1.6 mm, 2.5 times as long as wide; color dark reddish brown.

Frons as in *electinus* except epistomal callus shorter (on longitudinal body axis), ornamental setae uniformly distributed on summit of callus (without a median glabrous area as occurs in *electinus*); setae on lateral margins reduced in number and in length.

Pronotum 1.1 times as long as wide; about as in *electinus* except punctures not quite as elongate.

Elytra 1.6 times as long as wide; similar to *electinus* except striae punctures larger, interstriae only slightly wider than striae; declivity steeper, less strongly impressed; interstitial setae at base of declivity slightly flattened on their distal halves (not at all flattened in *electinus*).

TYPE LOCALITY.—Grecia, Costa Rica.

TYPE MATERIAL.—The female holotype was taken on 27-XI-1955, by B. Malkin.

The holotype is in my collection.

The type series of *electinus* (from Jalisco, Mexico) is entirely distinct from this species. However, other series from Nayarit and Guerrero are intermediate in size and show some indications of intergradation. If additional specimens are found in Central America that show additional intergradation, the population represented by this species may have to be reduced to subspecific rank.

Corthylus truncatus, n. sp.

This unique species is unmatched in this remarkable genus. It is distinguished from all other species in the genus by the very stout body form, by the elytra being equal in length to the pronotum, by the truncate, margined, elytral declivity, and by other characters described below.

FEMALE.—Length 4.0 mm, 1.8 times as long as wide; color yellowish brown (mature color?).

Frons deeply, broadly excavated from eye to eye, from epistoma to vertex; surface almost smooth, minutely irregular; lateral margins below eye subacute; epistomal margin rather strongly emarginate. Vestiture largely restricted to upper half of concavity, moderately abundant, longer toward upper margin; lateral margins below eye to epistomal emargination ornamented by a dense, confused row of rather long hair. Antennal club minutely pubescent, very large, rather strongly asymmetrical; sutures aseptate except possibly 1 at extreme anterior margin, showing as shallow grooves, 1 slightly oblique, 2 straight; cirrus very slender, consisting of about six setae, exceedingly long, left cirrus extending over back ending near right margin of pronotum.

Pronotum 0.81 times as long as wide; outline almost semicircular; transversely very broadly convex, longitudinally almost straight except feebly declivous on anterior third; asperities, weak, few in number, restricted to median third of declivous area; surface smooth, apparently slightly shagreened, punctures minute, sparse, inconspicuous. Glabrous.

Elytra 0.98; sides almost straight and parallel to declivital margin; posterior margin almost straight, weakly curved; disc smooth, shining, punctures sparse, minute, apparently confused. Declivity abrupt, subvertical, weakly convex, margin marked by an elevated circumdeclivital costa, its crest acute, continuous from suture at base to suture at apex without undulations or denticles; surface smooth, finely reticulate, punctures minute, confused, not close, a sparse row of fine granules in position of interstriae 3. Vestiture of short hair, sparse on disc, a bit more conspicuous on declivity; of variable length.

TYPE LOCALITY.—Jungle near Leonpampa, Huanuco Department, Peru.

TYPE MATERIAL.—The female holotype was taken at the type locality on 6-XII-1937, 800 m, No. 3811, by F. Woytkowski.

The holotype is in my collection.

Hylurgus indicus, n. sp.

Although several species have been assigned to this genus in past history, this appears to be only the third that actually belongs here. It is distinguished from *micklitzi* Watchl by the smaller size, by the absence of a frontal tubercle, by the vestiture, and by other characters cited below.

FEMALE.—Length 3.2 mm (paratypes 3.0–3.3 mm), 3.0 times as long as wide; rather dark reddish brown.

Frons resembling *micklitzi* except much more strongly convex, without a transverse impression just below middle, more coarsely tuberculate; median carina on epistoma of uniform height, without tubercle or tooth at dorsal end; vestiture apparently longer, more abundant.

Pronotum 1.1 times as long as wide; resembling *micklitzi* except more quadrate, sides more nearly parallel, almost straight; punctures apparently deeper, closer; vestiture shorter, more abundant.

Elytra 1.9 times as long as wide; resembling *micklitzi* except striae punctures more distinct, slightly larger; vestiture with much fewer setae in ground cover, erect setae mostly in rows on both disc and declivity (abundant and strongly confused in *micklitzi*).

MALE.—Apparently not represented in material at hand.

TYPE LOCALITY.—Kumaon (region), W. Almora, U.P., India.

TYPE MATERIAL.—The female holotype, and three female paratypes were taken at the type locality by H. G. Champion. Other paratypes include two labeled Ranikhet, Kumaon, U.P. India, 6-VIII-1916, *Pinus longifolia* logs, H. G. Champion, and 1 from U. Gumti Val., W. Almora, U.P., India, from the same host and collector. The current name of the host is *Pinus roxburghii*.

The holotype and four paratypes are in the Forest Research Institute Collection, Dehra Dun, U.P., India. Two paratypes are in my collection.

Pachycotes minor, n. sp.

This species is distinguished from *villosus* Schedl by the smaller size, by the much less abundant vestiture, by the much smaller striae punctures, by the smaller, more widely spaced declivital interstitial tubercles, and by other characters cited below.

MALE.—Length 2.3 mm (paratypes 2.3–2.6 mm), about 2.1 times as long as wide; color very dark brown.

Frons impressed (almost flat but not concave) on median half from slightly above eyes to below level of antennal insertion; lower half of impressed area shining, coarsely reticulate, dull, finely subreticulate and deeply, rather coarsely, somewhat closely punctured in remaining areas; epistomal margin slightly produced on median third; epistomal processes distinct and almost subtuberculate near median line. Glabrous on shining, coarsely reticulate area; rather coarse, moderately long, hairlike setae in lateral areas, shorter above. Antenna about as in *araucariae* Schedl, except scape very slightly longer.

Pronotum 0.9 times as long as wide; widest on basal fourth, sides convergently arcuate. Surface finely reticulate, rather dull; punctures moderately small, distinct but not deep, irregularly spaced by one to four diameters of a puncture. Vestiture short, sparse, most setae about equal in length to diameter of punctures from which they arise.

Elytra about 1.3 times as long as wide (spread slightly); sides almost straight and parallel on more than basal two-thirds, broadly rounded behind; basal margins with

individual crenulations recognizable (not costate as in some species); striae weakly impressed, punctures small, their centers reticulate-granulate, spaced in a row by about three diameters of a puncture; interstriae feebly convex, subreticulate, dull, each with a central row of low, poorly formed crenulations, crenulations decrease from half width of interstriae at base to subtubercles at base of declivity. Declivity steep, convex; striae more strongly impressed, punctures closer; interstriae more distinctly convex, each bearing a row of 7 to 9 moderately coarse, rounded tubercles to near apex, tubercles spaced by distances about equal to width of an interstriae. Vestiture sparse, consisting on posterior half of small, moderately abundant, amber scales, and rows of erect, rather short, moderately stout hairs; a few hairlike setae may extend to basal half.

FEMALE.— Similar to male except frons uniformly convex, without a glabrous, reticulate-granulate area on lower half; striae punctures less distinct.

TYPE LOCALITY.— Palen Creek, about 96 km (60 miles) south of Brisbane, Queensland, Australia.

TYPE MATERIAL.— The male holotype, female allotype, and 1 male and 5 female paratypes were reared 14 August 1972 from a piece of *Araucaria cunninghamii* taken by R. A. Yule that came from the type locality. These specimens emerged with an enormous series *Pachycotes clavatus* Schedl and were found by me among that material.

The holotype and allotype are in the Australian National Collection, Canberra; the paratypes are in my collection.

Phloeosinopsoides pumilus, n. sp.

This species is distinguished from *triseriatus* Schedl by the much smaller size, by the deeply, extensively excavated male frons, by the much larger, deeper, striae punctures, and by other characters cited below.

MALE.— Length 1.5 mm (paratypes 1.4–1.5 mm), 2.4 times as long as wide; color reddish brown, vestiture pale.

Frons broadly, deeply, subcircularly excavated from eye to eye, from epistoma to well above eyes; surface reticulate-subgranulate, punctures small, obscure; vestiture of sparse, coarse, long setae uniformly distributed.

Pronotum 0.94 times as long as wide; widest slightly behind middle, sides moderately arcuate, rather broadly rounded in front; surface smooth, dull, punctures small, close, their anterior margins elevated into very fine crenulations from base to apex; vestiture of rather numerous, short, pale, recumbent scales.

Elytra 1.5 times as long as wide; outline about as in *triseriatus*; striae slightly impressed, punctures very coarse, deep, close; interstriae half as wide as striae, punctures small, uniseriate, their anterior margins elevated, thereby causing interstriae to appear subserrate. Declivity steep, convex; details as on disc. Vestiture consisting of uniseriate interstitial rows of recumbent (anteriorly) to semirecumbent (declivity) short scales; each scale widest near its apex, about twice as long as wide.

FEMALE.— Similar to male except frons convex, surface reticulate-granulate, with very small, shining granules; pronotal crenulations distinctly larger.

TYPE LOCALITY.— Near Bulolo, Morobe District, New Guinea.

TYPE MATERIAL.— The male holotype, female allotype, and six paratypes were taken 6-VIII-1972, No. 91, from an unidentified vine by me.

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

Xylechinosomus pilosus, n. sp.

This species is distinguished from *hirsutus* Schedl (2.9 mm) by the smaller size, by the presence of some scalelike setae in the elytral ground cover, and by the absence of a small, rounded granule beside each puncture on the pronotum.

MALE.— Length 2.3 mm (allotype 2.4 mm), 2.2 times as long as wide; color brown.

Frons moderately concave from slightly below upper level of eyes to level of antennal insertion; surface shining, obscurely reticulate, punctures small and very obscure above, larger and more distinct below. Vestiture of fine, short, inconspicuous hair of uniform distribution.

Pronotum 0.82 times as long as wide; somewhat like *contractus* (Chapuis) except punctures much closer, each with its floor (interior) strongly reticulate; spaces between

punctures smooth. Vestiture of rather abundant, fine, moderately long hair.

Elytra 1.5 times as long as wide; about as in *hirsutus*; striae slightly impressed, punctures rather small, deep; interstriae about twice as wide as striae, shining, each with rather numerous, small, confused crenulations, smaller, rounded, and more numerous at base, reduced to pointed uniseriate tubercles at base of declivity. Declivity convex, moderately steep; interstriae each with a row of small, pointed tubercles. Vestiture of rather abundant, fine, long hair; some setae

on declivity of slender, pointed scales.

FEMALE.— Similar to male except frons irregularly convex, punctures more distinct; interstitial crenulations and tubercles much smaller; vestiture on pronotum and elytra distinctly shorter.

TYPE LOCALITY.— Curitiba, Parana, Brazil.

TYPE MATERIAL.— The male holotype and female allotype were taken at the type locality on 13-I-1969 in *Araucaria angustifolia* bark by C. W. and L. O'Brien.

The holotype and allotype are in my collection.