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NOTES ON SOME MEXICAN SCOLYTIDÆ, WITH DESCRIPTIONS OF SOME NEW SPECIES.

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Chapuis (1869), Eichhoff (1868-'79), and Blandford (1885-1904), have described several hundred species of Scolytids from Central America and Mexico, but there has been comparatively little recorded regarding their habits. Recently some information has been contributed in this line in an article by Prof. A. L. Herrera (El Progreso de Mexico, June 8, 1903) on a bark beetle injuring the white mulberry, and by Dr. S. J. Bonansea (in a pamphlet entitled "Birds and Insects," published by the Agricultural Society of Mexico, 1904), in which reference is made to extensive depredations by bark beetles on the pine forests in different sections of Mexico. The references to Scolytidæ in both of these papers were based on preliminary identifications of species sent to the Bureau of Entomology by the authors. Considerable additional Mexican material has been received from Prof. Herrera, Dr. Bonansea, and Mr. E. Baumann. In response to a request from Dr. Bonansea for names and descriptions of new species, and further information in regard to the named ones, this paper is presented, in order that he may include them in his forthcoming report on investigations of the causes of dying timber in Mexico.

The Scolytidæ received from these gentlemen represent nine genera and sixteen species, of which ten appear to be undescribed. Descriptions of these, with notes on other species from Mexico and their allies in the United States, follow:

Platypus rugulosus Chap. Three females and one male, Michoacan, Mexico, in wood of "chocolate tree," received from Prof. Herrera. This is a common and widely distributed species in Central America and Mexico, and probably extends into the southern border of the United States. One specimen in our collection from California appears to be different although closely allied.

Platypus pini, n. sp. Male type, length 5 mm.; very elongate cylindrical, piceous; legs and antennæ lighter reddish. Head, prominent, nearly one-third as long and slightly broader than anterior width of prothorax; front broad, flat, opaque, pubescent and punctured, but the punctures are very shallow, of irregular size and often contiguous; the occiput

convex, with two broad, opaque, slightly impressed longitudinal spaces each side of a slightly elevated, smooth, shining median one, the remaining surface towards the eyes shining, sparsely punctured and with a few long, backward-curved hairs. Prothorax subopaque, as long as the basal width, narrower in front and deeply excavated in the sides for the anterior legs; distinctly punctured, denser each side of a faint, median, dorsal, smooth space and coarser near the anterior and posterior margins; posterior third with distinct impressed dorsal line; base bisinuate. Elytra, subopaque; base elevated and with a subacute margin; striæ faintly impressed, narrow, shining, and with faint, shallow punctures; the interspaces subconvex, equally elevated towards the middle, not punctured except those on the sides, which have a row of very fine obscure ones; the declivity is darker, opaque, with shallow, shining punctures faintly evident; the third interspace is strongly elevated, carinate, with an acute apex and extending to the middle of the face of the declivity; five and seven are slightly elevated and acute but not extending much beyond the vertex; the apical process is divided into two distinct triangular teeth, outer one longer; the apex is deeply, obtusely emarginate; the first interspace is not distinctly tuberculate on the vertex.

♂ *Type*.—No. 7509 U. S. Nat. Mus., Chaleo, Mexico, October, 1903, in pine. Received from A. L. Herrera, under his number 873.

This is closely allied to a common (but undescribed) species which infests the pines in Arizona.

Gnathotrichus nitidifrons n. sp. Female type, length 2.8 mm.; elongate, cylindrical, brownish; head and ventral portion black; the legs reddish. Head broad, slightly convex, shining, and punctured each side of a broad smooth median space, which extends from the anterior margin to near the vertex; pubescence fine and sparse; eyes large, emarginate; antenna club with two nearly straight indistinct sutures on the anterior face and with a few scattering long hairs. Prothorax more than half as long as elytra; posterior two-thirds with sides parallel; anterior third with sides and anterior margin broadly rounded, the latter faintly roughened with broad serrations; anterior half sparsely pubescent, finely asperate, the asperities coarser towards anterior margin and much finer and denser towards the vertex and sides; posterior half glabrous, opaque, finely indistinctly punctured. Elytra glabrous, except on declivity, which bears a few long hairs; striæ not impressed, indistinct, faintly punctured; interspaces flat, faintly rugose; declivity with interspaces one and two slightly impressed and with slight elevation armed with a row of minute granules each side towards the vertex, while towards apex interspace one is slightly elevated and the others flattened and faintly rugose; the sides are not strongly rounded but narrowed towards the apex, giving it a slightly produced appearance.

♀ *Type*.—No. 7510 U. S. Nat. Mus., Michoacan, Mexico, in pine, Prof. A. L. Herrera, collector, bearing his number 1047.

This is allied to the common Eastern United States species *G. materiarius* Fitch, which infests the wood of pines from Maine to Florida and Texas, and *Picea* from Maine to the higher mountains of North Carolina. The Mexican species is distinct from *materiarius* by the broad, smooth, shining frontal space and the much more distinctly produced apex of the elytra.

Gnathotrichus sulcatus Lec. One specimen, Chaleo, Mexico, October, 1903, received from Prof. Herrera under his number 872, and another specimen from Michoacan, in pine, under his number 1047. I fail to find characters of sufficient value to separate these specimens from *G. sulcatus* Lec., which I have found to be a good species and not the male of *G. retusus* Lec., as considered by LeConte (Proc. Amer. Philos. Soc. XV, p. 350). *G. sulcatus* is a common and widely distributed species in the Pacific Coast and Rocky Mountain regions. I have found it in *Pinus*, *Tsuga*, *Pseudotsuga*, *Abies*, *Picea*, *Thuja*, and *Sequoia*. Blandford evidently had specimens of this species, together with (as he himself suggests) representatives of one or two other species when he drew up his descriptions of *G. consentaneus*.

Pityophthorus chaleænsis n. sp. Female type, length 2.6 mm.; elongate, cylindrical, dark, ferruginous; sides of prothorax and legs lighter. Head broad, flat, rather coarsely, densely, rugosely punctured and with epistoma-like elevation on the anterior margin; the face with a few scattering hairs and the margin fringed with long incurved yellow ones; eyes emarginate; antennal club small and sutures impressed on sides and face. Prothorax one-half as long as elytra; sides nearly parallel to anterior third, then narrowed to margin which is broadly rounded; nearly smooth; anterior rugosities confused, extending towards side margin; posterior half shining, with median smooth longitudinal space; punctures coarser and denser towards dorsal space, fine and sparse on sides; pubescence fine, sparse, recumbent. Elytra twice as long as prothorax; pubescence fine and sparse towards base, denser and longer on declivity; striae punctures in approximate rows on sides, confused towards suture, side margin and declivity; second interspace broadly, deeply impressed; the sutural interspaces elevated and roughened with a row of numerous acute granules; the third interspace rather strongly elevated and armed with a row of six or seven small, acute piliferous, granules; striae one and two obscure.

♀ *Type*.—No. 7511 U. S. Nat. Mus., Chaleo, Mexico,

October, 1903, in pine, from A. L. Herrera, under his number 872.

This species is not closely allied to any known species north of Mexico, and apparently is quite different from any of the nineteen species recognized from Central America and Mexico by Blandford.

Pityophthorus herrerae n. sp. Female type, length 2.5 mm.; elongate, cylindrical, piceous. Head broad, flat, finely rugosely punctured; pubescent and fringed with long, yellow hairs; the anterior margin with a smooth shining triangular elevation; eyes emarginate; antennæ missing. Prothorax slightly more than half as long as elytra, slightly narrowed from base to anterior margin, which is broadly rounded, faintly roughened, but not serrate; anterior rugosities confused, extending toward side margin, where they are much finer; posterior half with distinct longitudinal space, broader towards base, not elevated; punctures rather coarse and dense, becoming very fine towards the sides, but without interstitial minute points; anterior half and sides with fine sparse pubescence; posterior dorsal surface glabrous. Elytra pubescent only towards side margin and on declivity; stria punctures irregular but in approximate rows the interspace towards the suture and side margin with an occasional puncture; declivity with sutural interspaces slightly elevated and roughened with a few small irregular granules; apex slightly produced; the second interspace broad, flat, shining; the third scarcely elevated, punctured, but without distinct granules; the first stria is close to the first interspace, faintly impressed and punctured; the second stria is close to the third interspace, distinctly punctured.

Male type, length 2.55 mm.; differs from the female in the glabrous, shining, evenly punctured front, with strongly elevated, smooth, shining posterior margin, and a faintly elevated, shining lateral margin; antennæ yellowish-red, club with two slightly curved sutures, basal joint glabrous, shining; prothorax with anterior rugosities coarser; posterior half with broader dorsal space; elytra pubescent only along sides towards the margin, pubescence denser and longer on the sides of the declivity, but the vertex and face of the declivity are glabrous; the sutural and third interspaces more distinctly elevated and roughened with coarser granules.

♀ *Type*.—No. 7512 U. S. Nat. Mus., Mexico, from A. L. Herrera, under his number 696.

♂ *Type*.—No. 7512 U. S. Nat. Mus., from A. L. Herrera, under his number 694. One additional female with number 696 is smaller, 2.25 mm., but agrees exactly in other characters.

This appears to come close to *P. confusus*, Bland., but differs in the smooth punctation of the prothorax instead of "interstitial punctation of minute points" mentioned in the description of *confusus*.

Tomicus mexicanus n. sp. Female type, length 4.8 mm.; elongate, cylindrical, ferruginous, clothed with long fine hairs; declivity of elytra excavated and armed each side with three teeth, the first very small, acute—the second triangular, acute—the third widely separated, long, cylindrical and thickened toward tip. Head, front flat, subopaque, densely granulated with shining median impression and a small shining tubercle on the anterior margin; antennal club with two obscure, broadly curved sutures on the anterior face; the posterior face pubescent and with one indistinct broadly curved suture. Prothorax as broad as long; anterior two-thirds roughened with small asperities, becoming finer towards the sides; posterior third smooth, punctured, with narrow dorsal longitudinal space. Elytral punctures coarse, those of the striæ coarser and denser than those of the interspaces, first to fourth in distinct row, but the punctures on the sides are densely confused.

Male type, length 5 mm., same form and general characters as the female, except that the pubescence is less dense; the frontal impression deeper and opaque, the marginal tubercle more prominent, and the margin more distinctly granulated; the teeth of the declivity distinctly coarser, especially the first and second.

♀ and ♂ Types.—No. 7513 U. S. Nat. Mus., Mexico City, Mexico, 1903, in firewood, Prof. A. L. Herrera, collector, and bearing his number 865.

Two additional males from the same lot are of the same size and color of the female type, and agree exactly with the secondary sexual characters in the male.

This is evidently the species mentioned by Blandford (Biol. Centr. Amer., Vol. IV, Part 6, page 188), on the authority of Eichhoff, under *T. concinnus* Mann. It is, however, easily distinguished from specimens I have identified as *concinnus* by its reddish color and very much coarser puncture of the elytra and prothorax. Blandford compared his specimens with one from California, which, although closely allied to *concinnus*, evidently represents an undescribed species. *T. concinnus* is a boreal form extending down the coast into the United States with the Sitka spruce, in which it lives, while the California species is common in *Pinus radiata* in middle California and *Pinus murrayana* of the higher Sierras and extending, with this tree, as far north as Priest Lake, Idaho.

Tomicus integer Eichh. The specimens in our collection from Mexico received from Mr. Blandford under *T. plastographus* belong, without doubt, to *T. integer* Eichh., which is a good species, distinct from *T. plastographus* Lec., with which it has been confused. The type specimen of the latter which I have examined agrees with specimens from Monterey pine in California, but LeConte made the mistake in this, as he

did in many other cases, of including in his revision in the *Rhynchophora* characters of specimens other than the original type or types. There was only one specimen on which the original description was based, but in LeConte's revision a specimen from New Mexico was included which proves to be *T. integer* Eichh.

I have found *T. integer* to be a very common species throughout the Rocky Mountain region, from Montana east to the Black Hills of South Dakota, and south to New Mexico and Arizona, from which it extends into Mexico. It infests *Pinus ponderosa* and *Pinus monticola*, but no evidence has been found that it is a primarily destructive enemy. *T. plastographus* Lec., seems to be confined entirely to the sections in California where *P. radiata* grows.

Tomicus bonanseai n. sp. Female type, length 3.35 mm.; elongate cylindrical, dark reddish-brown. Prothorax slightly darker; declivity of elytra excavated and armed each side with four short acute teeth, the first smaller, and the second to fourth nearly of equal size, but the second and third are closer together and situated on a slight elevation of the margin. Head flat, opaque, densely granulated, clothed with short erect pubescence and with fine median elevated line from middle to anterior margin; antennæ missing. Prothorax as long as broad, sparsely pubescent towards sides to anterior margin; posterior half rather coarsely sparsely punctured, with smooth, shining dorsal space; sides parallel to anterior third, then strongly narrowed to apex. Elytra less than twice as long as prothorax, with short sparse pubescence towards the side margin and declivity; striæ faintly impressed, punctures distinct and closely placed, slightly coarser towards the middle; interspace one narrow, two and three broad, flat and not punctured towards base, fourth to ninth sparsely punctured.

Male type, length 3.35 mm.; yellowish-red (young example), differs from female in the narrower, more convex and more shining front, with the granules and punctures less distinct and with a more prominent subcarinate tubercle towards the middle; prothoracic punctures finer and less dense. Elytral striæ and interspaces the same, but the teeth of the declivity are much coarser—the first and fourth of equal size, acute; the second stout, triangular, with acute point at right angles to the third tooth, which is cylindrical, prominent and enlarged towards the apex. The antennal club is slightly oblong, with two sutures on the anterior face; the first straight and the second bisinuate, and posterior face is glabrous, shining, and without sutures.

♀ *Type*.—No. 7514 U. S. Nat. Mus., Tacubaya, Mexico, in pine, Dr. S. J. Bonansea collector, bearing his number 2.

♂ *Type*.—No. 7514 U. S. Nat. Mus., Prof. A. L. Herrera, collector, bearing his number 694.

This species belongs to the *T. pini* division of the genus, characterized by four marginal teeth on each side of the elytral declivity. Evidently it was not represented in material seen by Eichhoff and Blandford. It is readily recognized from *Tomicus integer* Eichh., by its much smaller size, and from *T. oregoni* Eichh. and other allied North American species, which might find their way into Mexico, by its more slender form.

Tomicus cribripennis Eichh. Four females and four males, Mexico, in pine, received from Dr. Bonansea. This species is a representative of the section of the genus characterized by five teeth on the side margin of the elytral declivity, and also with the interspaces of the elytra punctured. This section is represented in the United States by *Tomicus confusus* Lec., which I have found to be a common and sometimes destructive enemy of the piñon (*P. edulis* in Arizona, and *P. monophylla* in Southern California); also by an undescribed species from Idaho and Montana, in *Pinus monticola*.

The Mexican species differs from *T. grandicollis* Eichh. of the Eastern United States (which also has five teeth on the declivity) in the distinct punctures of the elytral interspaces. Blandford states that the specimens seen by him differ from the type in being smaller and less robust, which is the difference from *confusus* observed in the specimens before me.

Phlæophthorus moriperda n. sp. Female type, length 1.65 mm.; stout, cylindrical, reddish-brown; head, prothorax and ventral surface darker. Elytra, legs and antennal scape reddish. Head subconvex, subopaque, finely granulated and with very fine, short, sparse pubescence, and with a fine, median longitudinal elevated line on the slightly flattened and more shining anterior half; eyes oblong, oval, not emarginate; antennal scape with a few long hairs; club large with three triangular segments separated by two impressed slightly oblique sutures. Prothorax one-third broader than long, one-half as long as elytra, slightly narrowed from base to front, the anterior margin not serrate; surface opaque, clothed with reclining, stout, yellow pubescence and roughened by sparsely placed granules, which are coarser towards the sides. Elytra shining, the base elevated and serrate; the side margins serrate from middle to apex; serrations much coarser on the side margins of the declivity; striæ impressed; punctures distinct to vertex; interspaces faintly elevated and roughened with a row of asperities and each with a row of fine, yellowish hairs from base to apex; declivity convex; striæ deep and narrow, but the punctures obscure; interspaces convex, and with a row of small acute granules.

Male type, length 1.85 mm.; same form and color as female but with the head narrower and deeply concave, shining; the sides elevated and

with an acute tubercle towards the base of the antenna and faint broken transverse ridge across the front between the tubercles; the anterior margin with a small shining apical tubercle; the scape of the antenna distinctly fringed; the granules of the interspaces of the declivity are coarser on the vertex and face.

♀ and ♂ *Types*.—No. 7515 U. S. Nat. Mus., Irapuato, Mexico, in white mulberry, H. Chambon collector, but received from Prof. Herrera.

Three females and two males of the same lot vary in length from 1.65 to 2.1 mm., but otherwise show very little variation from the types.

Three specimens were received through Dr. Erwin F. Smith, from Prof. Herrera, who, as stated in his published account, received them from Mr. Hipolite Chambon, with the statement that it had killed more than one thousand small white mulberry trees in Irapuato, Mexico. This species differs from any of those mentioned by Blandford under *Phlæotribus*, but belongs to his division characterized by the club of the antenna, which is not twice as broad as long. This is a character common to the species of the well defined genus *Phlæophthorus* which is represented in the United States by *P. frontalis* and its allies, and in Europe by *P. rhododactylus*. The Mexican species comes closer to our mulberry bark beetle *P. frontalis*, but is distinct from it by its smaller size, brown club of the antenna, the prothorax more opaque, smoother, and the elytra more shining.

Phloeosinus tacubayæ n. sp. Female type, length 2.4 mm.; body stout, piceous, with elytral declivity more reddish; pubescence short, stout, intermixed with scales on declivity. Head with front convex, finely granulated, granules becoming sparser towards middle; with fine carina from middle to anterior margin and finely densely punctured on vertex; eyes oblique, deeply emarginate; antennæ missing, but in another specimen the club is oblong, with first and second sutures on anterior face nearly straight and the third strongly curved; the sutures are the same on the posterior face, but the first joint is very much shorter. Prothorax much broader than long; sides rounded from base to apex, faintly constricted towards anterior margin; surface shining, smooth, rather densely punctured, without dorsal line or space. Elytra twice as long as prothorax, and slightly broader; basal margin serrate, produced forward but not elevated; striæ narrow, with contiguous elongate punctures; interspaces flat, irregularly rugose; declivity convex; first and third interspaces serrate; second narrow, convex, punctured.

Male type, length 2.4 mm.; differs from female in its narrower front, with a faint median impression and in the declivity of the elytra, which is more shining and less pubescent.

♀ and ♂ *Types*.—No. 7516 U. S. Nat. Mus., Tacubaya, D. F., Mexico, in Cupressus, E. Baumann collector, February, 1903.

One additional male and two females from same lot show no difference except that the front of the males has a much more distinct elevated line from middle to anterior margin.

This species and the following belong to the division of the genus characterized by a smooth second interspace of the elytral declivity of the females. The species of this genus infest *Juniperus*, *Cupressus*, *Chamæcyparis*, *Taxodium*, *Sequoia*, and their allies, and, under certain conditions, may be destructive.

Phloeosinus baumanni n. sp. Female type, length 3.5 mm.; body stout; prothorax, ventral surface and legs black, elytra more reddish; pubescence yellowish, short, dense on front of head and prothorax, sparse and in approximate rows on elytra; the declivity clothed with fine, short scales. Head, front convex, rugose, with faint impression and faint, elevated line from margin to vertex, slightly broken by impression; eyes oblong; antennal club large, oblong, with three oblique broadly curved sutures on anterior face and three nearly transverse curved ones on the posterior face. Prothorax, one-third broader than long, narrowed from base to apex; sides rounded, faintly constricted anteriorly; punctures dense, coarser towards sides. Elytra slightly more than twice as long as prothorax; base subacute, produced forward, slightly elevated and serrate; striae scarcely impressed but with very coarse distinctly separated punctures; the interspaces narrow, scarcely elevated but roughened with rather coarse transverse rugosities which often extend across the striae between the punctures; declivity convex, with interspaces one and three strongly elevated and closely serrate, the second interspace nearly flat and densely subrugosely punctured.

Male type, length 4.1 mm.; same color and form as female, except that the prothorax is narrower anteriorly; the front is narrow, flat or subconcave, with median elevated line from middle to anterior margin; the elytral interspaces are smoother and the striae punctures more distinct, the declivity steep, with the first interspace broad, flat, shining and irregularly punctured, with two or three teeth on the vertex; the first stria is distinct, strongly punctured and broadly curved towards the side, almost obscuring the second interspace and stria; the third interspace is prominently elevated and serrate, with coarse, closely placed teeth.

♀ and ♂ *Types*.—No. 7517 U. S. Nat. Mus., Tacubaya, D. F., Mexico, in Cupressus, E. Baumann collector, February, 1903.

Fifteen females and nine males in same lot vary in length from 3.9 mm. to 4.1 mm.—average about 4 mm.

Dendroctonus mexicanus n. sp. Female type, length 4 mm.; elongate, cylindrical, dark brown. Head broad, with two frontal elevations separated by a shallow median groove; anterior and posterior halves punctured; middle rugose from eyes to frontal elevation; antennal club broad, compressed towards tip, and with two broadly curved sutures. Prothorax nearly as long as broad, slightly narrowed from base to anterior margin, which is sinuate, the base declivous and bisinuate; punctures moderately coarse, becoming finer towards sides; anterior third with distinct transverse ridge extending across proepisternum. Elytra twice as long as prothorax; sides parallel; base obliquely serrate; interspaces roughened with asperities, which are coarser towards base and vertex; the first interspace with a row of coarser asperities from near base to vertex; declivity subconvex, sparsely clothed with long erect hairs which also extend to near the middle of the elytra; the striae narrow, punctures obscure; interspaces flattened and roughened with irregular granules.

Male type, length 4 mm.; differs from female in the more prominent tuberculate frontal elevations separated by a deeper groove. Prothorax with transverse ridge across the anterior third less distinct than in the female and not extending across the proepisternum. Elytra with deeper striae and more convex interspaces.

♀ and ♂ *Types*.—No. 7518 U. S. Nat. Mus., Sacramento, Amecameca, Mexico, in pine, A. L. Herrera collector.

Twenty-five females and eleven males received at different times from A. L. Herrera and Dr. S. J. Bonansea, from Amecameca, Michoacan and Tacubaya, Mexico, vary in length from 3 mm. to 4 mm.—average about 3.8 mm.

The characters described in the types are fairly constant in all the specimens, but the submarginal ridge is more distinct in some females than in others, and, while present in some males, it is obscure or absent in others.

This species belongs to the division of the genus characterized by more prominent frontal tubercles in the male and a transverse ridge near the anterior margin of the prothorax of the female. It finds its nearest ally in *D. parallellocollis* Chap. of Mexico, and *D. frontalis* Zimm. of the Eastern and Southern States. It is, however, easily separated from *parallellocollis* by the uniform smaller size and more brownish color, and is distinct from *D. frontalis*, with which the smaller examples agree in color and size, by the much longer and coarser hairs of the elytral declivity, the rugosities coarser towards the base and declivity, and a row of coarse granules on the first elytral interspace. This is evidently the species most to blame for the destruction of the pine forests in Mexico, and evidently has habits very similar to that of *D. frontalis*, which devastated the pine and spruce forests of the Virginias in 1891 and 1892,

as described in Bulletin No. 56, West Virginia Agricultural Experiment Station.

Dendroctonus parallellocollis Chap. Ten specimens received from Prof. Herrera, taken from dying pine trees in Michoacan and other localities in Mexico. This is evidently the same as *D. approximatus* Dietz, which name is more recent, but may be used for the variety found as a common enemy of the pine in Arizona and New Mexico. Specimens of this variety are distinguished from those before me from Mexico only by the much shorter pubescence and hairs on the sides of the prothorax towards and on the basal angle. All the species of *Dendroctonus* are exceedingly variable, and when a large series of specimens of allied forms are examined it is very difficult to separate them by any constant characters.

Dendroctonus valens Lec. Four specimens, Michoacan, Mexico in pine, received from Prof. Herrera. These are typical examples of the large red *Dendroctonus* heretofore identified as *D. terebrans* Oliv., which latter is a black form restricted to the Eastern and Southern United States, while *D. valens* is widely distributed over the Eastern as well as the Western United States and is a common enemy of all of the pines, and occasionally found in spruce. It breeds in the living bark at the base of healthy trees or that of stumps of recently felled ones. I have found that a large per cent. of the so-called basal fire wounds of the Western yellow pine is primarily due to the work of this species. Very little evidence has been found, however, of trees having been killed by it.

Hylurgops planirostris Chap. One specimen, Mexico City, 1903, in firewood, received from Prof. Herrera, under his number 865. This species was recorded by Blandford from several localities in Mexico and Guatemala. It is, as he says, allied to *H. rugipennis* Mann., which I have found to be common in *Picea*, *Pinus* and occasionally in *Abies* and *Pseudotsuga* from Northwestern Washington to the Black Hills of South Dakota, and south to Monterey, California and Williams, Arizona. The Mexican species is easily separated from *rugipennis*, however, by the obscure punctures and fine rugosities of the prothorax. Blandford included *H. planirostris* in the genus *Hylastes*, but it seems to me that *Hylurgops* is sufficiently characterized by the deeply bilobed third tarsal joint and other characters to justify retaining it for this and several European and American species.

Mr. Schwarz stated that the life-history of the remarkable Mexican Scolytid genus *Chapuisia* has been published by