



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

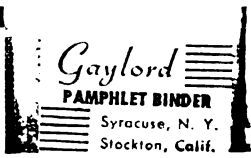
About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

**Descriptions of
eight new bark
beetles (Ipidae)
from
Mississippi**

**Maulsby Willett
Blackman**





D. Col. - B629

J. M. Wheeler

MUSEUM OF COMPARATIVE ZOOLOGY
PAMPHLET COLLECTION

Mississippi Agricultural Experiment Station

Technical Bulletin No. 10

DESCRIPTIONS OF EIGHT NEW BARK BEETLES
(IPIDAE) FROM MISSISSIPPI

By

M. W. BLACKMAN
Professor of Forest Entomology
New York State College of Forestry
Syracuse, New York

MISSISSIPPI
AGRICULTURAL EXPERIMENT STATION,
Agricultural College, Mississippi.

J. R. RICKS, Director.

MAY, 1921

DESCRIPTIONS OF EIGHT NEW BARK BEETLES (IPIDAE) FROM MISSISSIPPI*

by

M. W. BLACKMAN,

PROFESSOR OF FOREST ENTOMOLOGY,
New York State College of Forestry,
Syracuse, N. Y.

During the course of a seven months field study of the Bark beetles of Mississippi, while the writer was working for the Mississippi State Plant Board on sabbatical leave from the New York State College of Forestry, a number of undescribed species were taken. A number of these, all of them belonging to the sub-family *Micracinae*, have recently been described in a revisional paper on this group**. In the present paper eight additional new species are described and more will probably appear in a later article.

The writer wishes to express his appreciation to Professor R. W. Harned of the Plant Board and to the various members of his staff for numerous courtesies during the course of the field work.

*Contribution from the Miss. State Plant Board and the Dept. of Forest Entomology (Contribution No. 32), New York State College of Forestry, Syracuse, N. Y.

**Miss. Agri. Experiment Sta., Tech. Bull. No. 9.

Phthorophloeus dentifrons n. sp.

Description of Adult Female. Color black, with light grey, nearly white hairs; 1.2 mm. to 1.6 mm. long (type 1.57 mm.); 2.29 times as long as wide.

Front convex, transversely impressed just above the epistomal margin, slightly flattened above a transverse, arcuate elevation, extending between the bases of the antennae; surface above very finely reticulate, weakly punctured, with very fine hairs, with a small pit or fovea at the center; eyes rather finely granulate, long, slender oval, with inner margin straight and entire; antennal club with the lateral extensions of the segments nearly twice as wide as long; scape considerably longer than funicle with a sparse fringe of hairs of moderate length; pedicel nearly as long as the other four segments of funicle combined.

Pronotum 1.13 times as wide as long; widest near posterior, narrowed anteriorly, sides regularly rounded; anterior margin armed with a row of teeth or serrations, smaller and nearly lacking at the median line, larger laterally; disc shining, divided by a slightly raised, impunctate median line extending the entire length, surface strongly punctured and without granules on a space at each side of the median line, granulate-punctate at the sides behind, strongly asperate at the sides in front; entire surface ornamented with rather coarse, nearly white hairs or bristles; ventral surface finely reticulate, sparsely punctured anteriorly, impunctate posteriorly.

Elytra wider than thorax; 1.54 times as long as broad; sides subparallel to level of declivity; narrowly rounded posteriorly; basal margins separately arcuate, elevated, with a marginal row of strong teeth, and a second row of similar teeth behind and parallel to it; striae impressed, striae punctures coarse and closely arranged; interspaces narrow, each with a row of small, rounded granules and shallow punctures. Declivity convex, striae narrower, with punctures becoming much smaller posteriorly; third, seventh and ninth interspaces with several larger more acute granules, those of the ninth interspace and similar ones on the edge of the elytra forming an irregular serrate posterior outline when seen from above. Entire elytra ornamented with numerous white clavate hairs arising from the interspaces and arranged in fairly definite rows.

Hairs on the ventral surface similar in color but not clavate; first, second and fifth ventral segments subequal in length, and each nearly equal to the third and fourth combined.

Male. Average size somewhat smaller; front narrower than in *P. frontalis*, rather deeply concave on an oval area of which the longer diameter is dorso-ventral; with a small, erect, acute spine of variable length at each side mesad to insertion of antennae; antennal scape with a fringe of long, nearly white hairs; elytra more broadly rounded posteriorly, with three small sharp denticles on the third interspace, one near the summit of the fifth, two on the seventh, and four on the ninth interspaces; posterior margin serrate near the tip.

Described from a series of more than a hundred specimens taken by the author from their burrows in dead limbs and twigs of hackberry (*Celtis Missipiensis* Bosc.) at A. & M. College, March 23, 24 and May 19, 1920. The same species was also taken by the writer from *Celtis* sp. on the campus of the University of Kansas, Lawrence, Kans., June 10, 1920.

This species is rather closely allied to *P. frontalis* Zimm. but is very easily distinguished from it by its black color, much smaller size, coarser, shorter hairs which are grey rather than yellow; by the smoother, more sparsely punctured and more sparsely pubescent frons; by the more finely granulate eyes; by the more finely sculptured thoracic disc; by the more strongly elevated and serrate anterior margin of the elytra; by the much narrower interspaces, finer granulation of the elytral interspaces, as well as by a number of other characteristics. It is also distinguished by its habits as the adults remain in their old burrows during the winter months and emerge in the spring to start new brood burrows. In *P. frontalis* Zimm, most of the young adults, at least, emerge in the fall and spend the winter in feeding burrows in the outer part of the living bark of mulberry where they may be found during the winter and early spring.

It is barely possible that the form here described is identical with *Phoetribus texanus* Schaeffer, but such is not believed to be the case. The description of this species is, however, so brief and general as to make a certain determination impossible without seeing the type. However, from the description *P. texanus* Schaefer. is apparently larger, and much stouter in body form, with the thorax more coarsely sculptured. Schaeffer's species was described from Brownsville, Texas, the host tree not being recorded.

Phthorophloeus mississippiensis n. sp.

Description of the Adult Female. Dark reddish brown to almost black in color; 1.81 mm. long, 2.14 times as long as wide.

Front of the head convex; slightly depressed and moderately punctate just above the epistomal margin; with a transverse elevated carina extending between the bases of the antennae, arcuate but interrupted or slightly emarginate at the median line; convex above, punctures numerous, coarser but shallower than below; surface shining, pubescence shorter and more scanty than in *P. luminumis* Harr. Eyes very elongate oval, with the inner margin straight and entire, moderately finely granulate. Antennal scape club shaped, with a few moderate hairs on its outer face; funicle 5-jointed, less than half as long as scape; pedicel nearly as long as the distal segments which are closely joined and progressively widened distally; club with lateral extensions nearly exactly twice as wide as the length of the segment at the base (not so much extended as in *luminumis*).

Pronotum 1.3 times as wide as long (proportionately wider than in *liminaris*); widest near posterior end, with the sides arcuate behind, constricted in front of middle and the anterior margin very broadly emarginate; disc densely and rather roughly punctured, more roughly and coarsely than in *liminaris*, with coarser and shorter pubescence, with an incomplete, median, longitudinal, slightly elevated, smooth carina; sides and anterior areas slightly rugose; entire surface reticulate and dully shining.

Elytra wider than pronotum, 1.4 times as long as wide, widest at level of declivity; with the sides subparallel; broadly rounded behind (more broadly than in *liminaris*); basal margins separately arcuate, with a marginal row of serrations; striae rather more deeply impressed than in *liminaris*, coarsely, closely punctured; interspaces of equal width, with rather numerous, but fine punctures; granules small but very definite, not arranged uniseriably. Declivity steeply convex; both striae and interspaces narrowed toward apex, interspaces similar with slightly coarser granules arranged uniseriably (In *liminaris* the 2d interspace is narrower and with smaller granules than the first and third and the granules of the declivity are considerably coarser). Vestiture consisting of very fine, short, appressed, strial hairs and much longer, coarser, and more numerous, erect hairs from the interspaces. (The latter are not so long as in *liminaris*.)

Male with the front of head flattened and nearly impunctate below the transverse arcuate carina, slightly depressed above it; smaller, with the sculpture of pronotum and elytra coarser.

This insect is quite closely related to *P. liminaris* Harris but differs in a number of structural characters as pointed out in the description. These differences, together with its considerably smaller size, more southern distribution and different host tree seem sufficient to warrant considering it a separate species.

Described from a series of 26 specimens collected by the writer at Agricultural College, Miss., Jan. 21, March 28 and 30, 1920, from their burrows in the bark of dying wild plum *Prunus angustifolia* Marsh.

The types are in the author's collection; paratypes at Agricultural College, Miss., and the New York State College of Forestry at Syracuse, N. Y.

Phloeosinus enixus n. sp.

Description of the Adult Female. Black or very dark brown; 2.47 mm. long; 1.96 times as long as broad.

Front of the head plano-convex, shining, rather coarsely, moderately closely granulate-punctate, transversely impressed below, with a faint, median, longitudinal carina somewhat obscured by the coarse granules. Eyes elongate oval (wider than in *canadensis*), deeply, rather broadly emarginate. Antennae lighter in color, club compressed with sutures moderately oblique.

Pronotum 1.33 times as wide as long; widest at the base; sides arcuate behind, strongly constricted in front of the middle; anterior margin broadly

rounded; posterior margin bisinuate; median line faintly elevated posteriorly; disc with rather closely placed, deep punctures of moderate size; sub-basal impression and lateral calli lacking; with a distinct transverse impression between the anterior lateral constrictions. Mesonotum finely but very distinctly reticulate; scutellum very small; meso-sternum oblique and coarsely punctured in front of coxae, steep between them.

Elytra 1.86 times as long as pronotum; 1.27 times as long as wide; wider than the pronotum, with the basal margins separately arcuate, elevated and serrate; with the sides straight and subparallel for about half of their length, then arcuate and broadly rounded behind; striae very narrow, distinctly and rather deeply impressed, with fine, indistinct punctures; interspaces very wide, nearly flat; the first interspace wide at base constricted 1/3 of the way back, then widened behind; second interspace of nearly equal width throughout; all interspaces coarsely, confusedly granulate-punctate anteriorly on the disc, with all but the second, fourth and sixth becoming uniseriately and more strongly granulate or dentate toward the declivity, second and fourth interspaces becoming flattened, smooth and devoid of granules but still confusedly punctured back of the middle. Declivity convex; with the striae punctured as on the disc; second and fourth interspaces flat, devoid of granules, punctured; others convex and dentate, first more sparsely and strongly toothed; third, fifth, seventh, and ninth with smaller denticles. Vestiture consisting of numerous moderately fine, short, grey hairs from the interspaces, slightly coarser on the declivity.

Male with the frons narrower, more flattened or even slightly concave at the center, with a small sub-circular impunctate central area, longitudinal carina extending farther dorsad; teeth on declivital interspaces slightly coarser, vestiture less abundant; usually smaller.

This species is closely allied to *P. dentatus* Say and *P. canadensis* Sw. especially to the latter from which it is readily distinguished by the slightly stouter form, the larger pronotum, the much flatter elytral interspaces and the much stronger development of the interspacial teeth on the declivity.

Described from a series of 19 specimens removed from the bark of *Juniperus virginiana* L. at Agricultural College, Natchez, Ripley and Wallerville, Miss., Nov. 6, 1919, March 11, April 21 and 23, 1920. Usually occurring in the same material infested with *P. dentatus* Say.

Pseudopityophthorus gracilus n. sp.

Description of the Adult Beetle. Very dark brown to black in color; 1.1 to 1.31 mm. long, 3.1 times as long as wide.

Front of head flattened on a semicircular area; deeply and rather roughly punctured, with fine, rather sparse and short pubescence. Eyes rather finely granulate, moderately broad and deeply emarginate. Antennae much lighter in color; scape longer than the funicle, club large, broadly oval, with first and second sutures broadly, third suture more strongly arcuate, first segment considerably narrower than the others.

Pronotum 1.28 times as long as wide; widest behind the middle, with the sides weakly arcuate posteriorly, very slightly constricted just in front of the middle, moderately rounded in front, with the anterior portion extending beyond and over-hanging the head; anterior margin distinctly and regularly serrate; anterior area strongly finely asperate; summit moderate, just anterior to the middle; posterior area shining, finely punctulate; median line very slightly elevated; with an impunctate area at each side; posterior marginal line fine but distinct. Lateral margin rather sharp behind, rounded anteriorly; ventral surface shining, apparently impunctate except in the anterior angle.

Elytra equal to pronotum in width; 1.83 times as long as wide; sides sub-parallel, moderately rounded behind; surface shining; striae not impressed, stria punctures minute, in fairly definite rows, each puncture bearing a very fine short hair; interspaces not visibly punctured, very finely rugulose toward the base. Declivity convex, less abrupt than in other eastern species, sulcal impression hardly perceptible; hairs stouter and longer on the declivity and posterior lateral angles.

The seventeen specimens in the type series show no such sexual differences as exist in other species of this genus. It is probable that they are all females.

Readily distinguished from *P. minutissimus* Zimm. by its smaller size, much more slender form, by the more extended and narrowly rounded anterior margin of the pronotum, as well as by other characteristics.

Collected by the author at Natchez, Miss., March 9, 1920, from the bark of small dead limbs of water oak *Quercus nigra* L., and of *Quercus* sp.

Pityophthorus scriptor n. sp.

Description of the Adult Female. Dark reddish brown in color; 1.54 mm. long; 2.84 times as long as wide.

Front of head somewhat flattened on more than a semicircle, densely, finely punctured and moderately thickly pubescent with fine, rather long, yellow hairs. Eyes rather widely but not deeply emarginate, moderately coarsely granulate. Antennae lighter in color, scape considerably longer than funicle; distal funicular segments widened on the upper side; club broadly oval, margin strongly crenulate, with the first two sutures apparently weakly arcuate, the third more strongly curved. (The first and second sutures are partly chitinized, the chitinized portions extending nearly straight across. However, the setae are so arranged in the lateral distal angles of the first and second segments as to give the appearance of arcuate sutures. The third suture is not chitinized and consists of an arcuate arrangement of setigerous punctures.)

Pronotum 1.05 times as long as wide, with the sides subparallel (very slightly arcuate) behind, very feebly constricted in front of the middle, broadly rounded behind; anterior margin moderately broadly rounded, regularly serrate; asperities of the anterior area arranged in distinct or nearly distinct concentric rows, the bases being more or less fused to form complete or broken ridges, the first row separated from the margin by a definite, distinctly punctured area; summit moderate, with a slight depression just posterior to it; posterior area strongly, rather coarsely punctured, with an indefinite, impunctate area in the median line; sides more finely punctured. Posterior margin very apparent and continuous with a definite sharp side margin; ventral surface smooth behind but strongly punctured in the anterior angle.

Elytra very slightly wider than pronotum, 1.68 times as long as wide; with the sides faintly arcuate to the declivity, broadly rounded at the posterior lateral angles and subacuminate behind; surface moderately shining; striae not impressed, stria punctures moderately coarse, deep, in regular rows; interspaces narrow, impunctate except at the declivital summit, weakly rugulose. Declivity only moderately steep; suture moderately elevated, sparsely and weakly granulate and hairy; punctures of first stria much reduced, often lacking midway on the declivity, those of second stria slightly smaller posteriorly; second interspace considerably widened, smooth, shining, forming a definite sulcus at each side of the elevated suture; lateral elevations not prominent, weakly and sparsely granulate, with fairly abundant, moderately coarse stiff hairs; ventral segments hairy, last ventral segment very widely and very shallowly emarginate behind, nearly straight.

Male with the body form stouter; 2.64 times as long as wide; front of head not so much flattened, with the punctures much sparser and the hairs finer, shorter and much less abundant; pronotum nearly exactly as broad as long, with the asperities more completely fused to form continuous concentric ridges, posterior area with the punctures smaller and with an irregular impunctate area at each side; granules of the elytral declivity coarser; ventral segments with fewer, shorter and finer hairs.

Described from a series of 70 specimens taken by the author from the bark of sumach (*Rhus hirta* Sudw.), Nov. 6, 1919, Feb. 14, March 11, 22 and May 19, 1920, at Agricultural College, New Albany and Corinth, Miss. Apparently a quite common species, very readily distinguished from *P. rhois* Sw. by the pubescent frons in the female, by the more strongly elevated suture on the declivity and by the subacuminate posterior end of the elytra as well as by other characteristics.

—

Pityophthorus natalis n. sp.

Description of the Adult. Reddish brown; 1.4—1.5 mm. long (type 1.43 mm.); 2.6 times as long as wide.

Front of head flattened below on an area a little less than a semicircle, bordered at the sides by a distinct elevated line, densely, rather coarsely

MISSISSIPPI EXPERIMENT STATION

and roughly punctured, with a slightly raised longitudinal carina extending from a distinct emargination at the middle of the epistomal margin to and beyond the elevated border; frons above and at the sides similarly punctured, entire frons with rather fine, light yellow hairs, short above but becoming longer toward the epistoma. Eyes rather coarsely granulate, with the inner line broadly emarginate. Antennae lighter in color; with the scape but little longer than the funicle; distal segments of funicle but little widened; club large, $1\frac{1}{3}$ times as long as wide, with the sides crenulate, first two sutures partially chitinized, nearly straight, third suture not septate, arcuate and near the distal margin.

Pronotum very slightly (1.03 times) longer than wide; widest behind the middle, with the sides weakly arcuate behind, very faintly constricted before the middle, rather broadly rounded in front; posterior margin distinctly margined, very broadly, subtruncately, rounded; anterior margin distinctly but rather finely serrate; anterior area with the asperities in nearly regular concentric lines and with those of each line usually fused at the base, producing complete or nearly complete raised serrate ridges, the first separated from the anterior margin by a finely punctured area nearly twice as wide as those between the other rows; posterior area moderately coarsely, deeply punctured, more sparsely and finely on the sides, with a slightly raised median, longitudinal impunctate area; lateral margin sharp and distinct to a point even with the anterior border of the prosternum; ventral surface smooth and impunctate behind, rather finely punctured in the anterior angle.

Elytra slightly wider than pronotum; 1.56 times as long as wide; widest $\frac{2}{3}$ of way back, with the sides weakly arcuate; broadly subtruncately rounded behind; surface shining; striae scarcely impressed, stria punctures, rather coarse, deep and close; interspaces faintly rugulose, impunctate in front of middle, sparsely punctured behind middle and on the sides. Declivity abrupt; sulcate at each side of the rather wide, elevated, sparsely and finely granulate, uniserially hairy suture; punctures of the first stria reduced; second interspace flat and depressed to form the sulcus, little if any widened; lateral elevations moderate, very weakly and sparsely or not at all granulate; interspaces of the declivity (except the second) and of the sides, with rather numerous moderately long, stiff hairs. Posterior margin of the last ventral abdominal segment nearly straight.

No well-marked secondary sexual characters such as are common in this genus were observed in the type series. However, certain specimens have a somewhat more slender form correlated with a more widely plano-convex frons and they are believed to be females. If this be true the type used in preparing the description is a male. The species is rather closely related to *P. rhois* Sw. but can be readily separated by careful study.

Described from a series of 27 specimens taken by the author from beneath the bark of the dead limbs of red-bud (*Cercis canadensis* L.) at Agricultural College, Miss., Nov. 11, 1919, and March 26, 1920.

PLATE I.

- Fig. 1. *Phthorophloeus dentifrons* n. sp., x 40 dia.
Fig. 2. *Phthorophloeus mississippiensis* n. sp., x 32 dia.
Fig. 3. *Phloeosinus enixus* n. sp., x 25 dia.
Fig. 4. *Pseudopityophthorus gracilus* n. sp., x 55 dia.
Fig. 5. *Pityophthorus natalis* n. sp., x 44 dia.
Fig. 6. *Pityophthorus scriptor* n. sp., x 42 dia.

NEW MISSISSIPPI IPIDAE

PLATE I

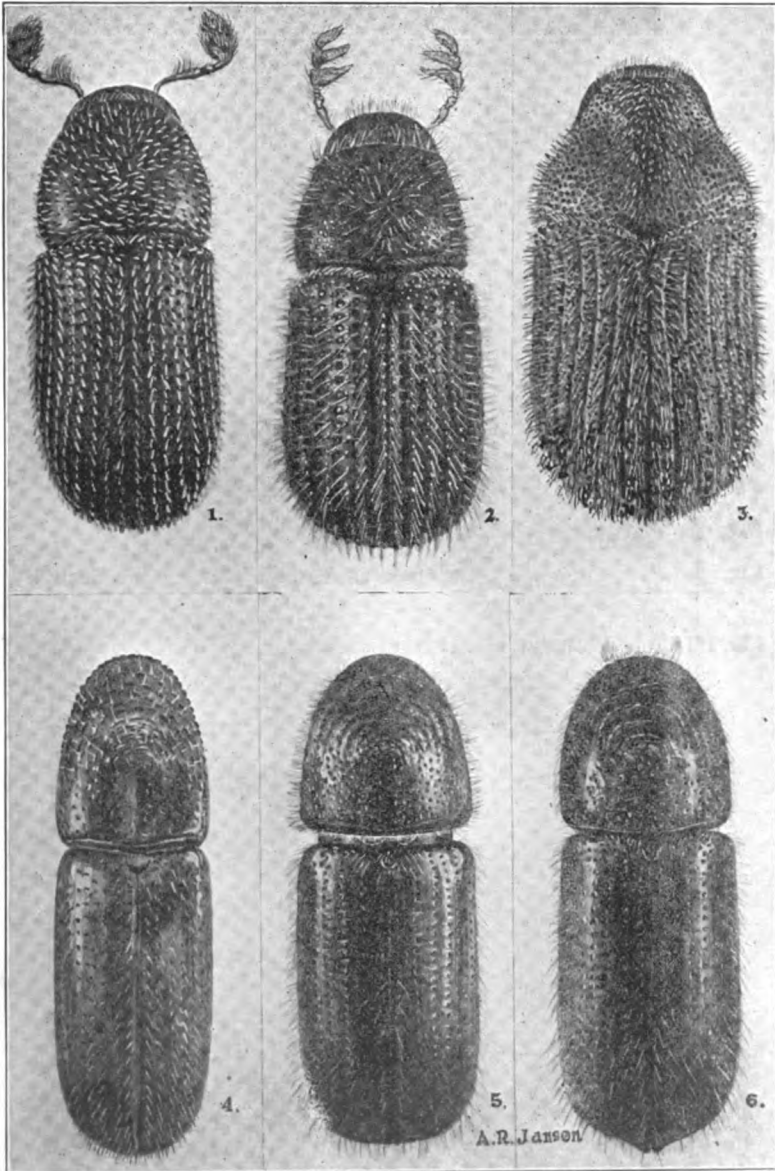


PLATE II.

- Fig. 7. *Pityogenes meridianus* n. sp., female, x 25 dia.
- Fig. 8. *P. meridianus* n. sp., male, x 25 dia.
- Fig. 9. *P. meridianus* n. sp., posterior-lateral view of the declivity of the male.
- Fig. 10. *P. meridianus* n. sp., front view.

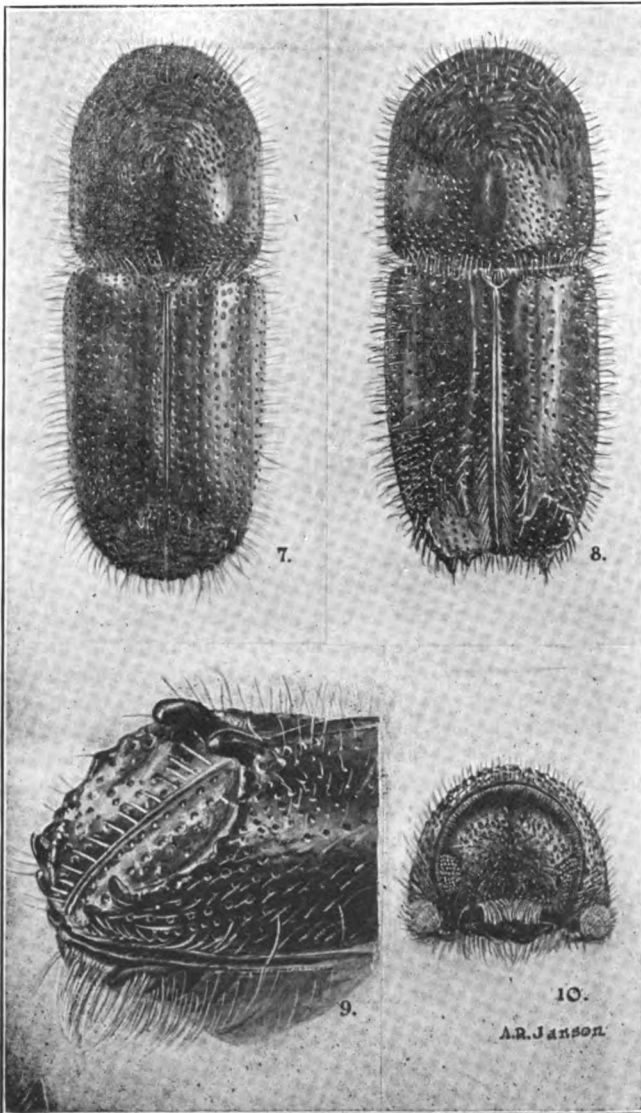
Gaylord

PAMPHLET BINDER

Syracuse, N. Y.
Stockton, Calif.

NEW MISSISSIPPI IPIDAE

PLATE II



Pityophthorus liquidambarus n. sp.

Description of the Adult Female. Yellowish brown to light reddish brown; 1.3 to 1.4 mm. long (type 1.35 mm.); 2.87 times as long as wide.

Front of the head flattened from eye to eye; very finely, sparsely punctured, shining, with very fine and very sparse, short yellow hairs, the flattened area bordered by a fringe of long, rather coarse, yellow hairs which are much longer dorsal to the upper angle of the eyes. Eyes distinctly emarginate, coarsely granulate. Antennae but little lighter than the rest of body; scape relatively short, distinctly club-shaped; funicle with pedicel very wide, nearly as long as the distal segments combined, distal segments but little widened, the two sides equal; club 1 1/2 times as long as wide with the first suture partially chitinized, the second nearly entirely chitinized, both apparently feebly arcuate, third suture not chitinized, subparallel to the distal border.

Pronotum 1.12 times as long as wide, widest just behind the middle, sides arcuate behind, very slightly constricted just in front of the middle, moderately narrowly rounded in front; front margin slightly extended, distinctly serrate; anterior area with the asperities fused and arranged in nearly regular, raised, concentric lines; posterior area moderately punctured, divided by a slightly raised, longitudinal, impunctate line. Lateral margin sharp and distinct behind; ventral surface smooth and impunctate behind, punctured in the anterior angle.

Elytra very slightly wider than pronotum; 1.78 times as long as wide; with the sides subparallel to behind the middle, then weakly arcuate to the very broadly rounded, subtruncate posterior end; surface moderately shining; stria punctures, deep, of moderate size, arranged in definite rows; interspaces moderately narrow, rugulose, nearly entirely impunctate on the disc, sparsely punctured on the sides and on the sutural interspace. Declivity moderately abrupt; punctures of the first stria somewhat reduced, those of the second normal, second interspace sulcate, not widened; suture strongly elevated except at apex, rather wide, with a row of moderate sized granules which are reduced or wanting toward the apex; lateral elevations fairly prominent, weakly granulate and with a considerable number of stiff hairs. Ventral segments of abdomen rather hairy; the last with the posterior line nearly straight.

Male slightly stouter, front of head convex above, flattened below, moderately punctured, with rather sparse, fine, short hairs; pronotum 1.05 times as long as wide; granules on declivity slightly coarser.

Described from a long series of specimens taken from beneath the bark of limbs of the sweet gum (*Liquidambar styraciflua* L.), Nov. 2, 4, 21, 26, 1919, Feb. 21, March 2, and April 25, 26 at Agricultural College, Hattiesburg, Meridian, Corinth and Ripley, Miss., and at Mound, La. This species is very common in dying and recently cut branches of sweet gum. It is

possibly the same species mentioned by Schwarz (1888, 1891)* and by him identified as *P. consimilis* Lec. After comparing my specimens with Lecomte's type, however, there can be no doubt that these are distinct from his *consimilis*.

Pityogenes meridianus n. sp.

Description of the Adult Female. Very dark reddish brown to black in color; 2.86 mm. long; 2.73 times as long as wide.

Front of the head broad, convex, shining, sparsely clothed with rather fine hairs, roughly and coarsely punctured toward the vertex, granulate-punctate below, the punctures and granules becoming progressively finer toward the median line, which is impunctate, shining, flat or very slightly elevated, ending in a broad low tooth at the epistomal margin which is emarginate. Eyes broadly oval, moderately coarsely granulate, with the inner margin only slightly sinuate. Antennae lighter in color, especially the club; scape club-shaped, longer than funicle; funicle with pedicel three fourths as long as the four distal segments combined, distal segments progressively wider; club compressed, circular in outline, with the first suture sinuate, very broadly curved at the center, second nearly straight.

Pronotum 1.16 times as long as wide; widest behind the middle, with the sides subparallel, very slightly arcuate on the posterior half; slightly constricted and rather broadly rounded in front; anterior margin slightly elevated, serrate; anterior area densely covered with short, blunt asperities; posterior area rather coarsely, not closely punctured, with a rather wide, distinctly elevated, median, longitudinal impunctate area extending from the summit nearly to the posterior margin, and an irregular oval impunctate area at each side; pubescence sparse, nearly wanting on disc but longer and more plentiful at the sides.

Elytra as wide as pronotum; 1.62 times as long as wide; with the sides subparallel (slightly arcuate) to the level of the declivity, very broadly rounded behind; surface of the disc shining, becoming somewhat rugose near the declivity; sutural striae impressed, especially near the base and declivity, the others not impressed, striae punctures deep and rather coarse, moderately closely but rather irregularly spaced, in fairly regular rows; interspaces broad, with punctures of equal size but much more sparsely placed, more numerous on the 1st, 3rd, and 5th interspaces and at the sides. Declivity steep, sulcate, the suture narrow, slightly elevated, closely punctured; the declivital face broadly, not deeply excavated, distinctly and coarsely punctured; lateral prominences elevated, forming a granulate ridge which is continued ventrally to form a blunt, granulate apical-ridge; with two small teeth at each side, one in the second interspace near the origin

* E. A. Schwarz 1888—Ent. Soc. Wash. Vol. I P. 163.

E. A. Schwarz 1891—Ent. Soc. Wash. Vol. II P. 167.

of the declivity (it being the most posterior and largest of a series of several denticles beginning anterior to the declivity and becoming progressively larger), and another one more lateral in position and near the apex. (In some females the teeth are much finer and the denticles and granules nearly lacking.) Disc and sides sparsely clothed with moderately short stiff erect hairs which are more numerous and longer at the sides and on the declivity. Ventral segments sparsely hairy with rather long hairs; last segment very widely emarginate.

The Male is about the same size but slightly broader; frons similar to female but granules coarser; pronotum nearly exactly as broad as long, with the serrations and asperities coarser; declivity of the elytra more deeply concave, deeply and strongly punctured, with the lateral margins more elevated and sharper; with a long rather slender tooth, hooked at the tip, arising from opposite the second stria, with several blunt tubercles at the sides on the lateral margin and two prominent conical teeth on the margin at each side near the apex, the lateral one being sharper and longer.

This species is more closely related to *P. plagiatus* Lec., *P. knechteli* Sw. and *P. carinulatus* Lec. than to other American species. It is, however, readily separated from the former by its darker color, larger size and numerous other characters and from the latter two by its smaller size, much coarser punctures of the elytral disc and declivity as well as by other differences brought out in the description.

Described from 26 specimens cut from their burrows in loblolly (*Pinus taeda* L.) and shortleaf pine (*Pinus echinata* Mill.), Nov. 3, 4, 14, 21, 1919, and March 22, 1920, at Agricultural College, Meridian and Hattiesburg, Miss.

Gaylord 
PAMPHLET BINDER
Syracuse, N. Y.
Stockton, Calif.



