

issued



by the

SMITHSONIAN INSTITUTION  
U. S. NATIONAL MUSEUM

Vol. 101

Washington: 1950

No. 3271

A REVISION OF THE BEETLES OF THE GENUS  
MYOCHROUS

By DORIS HOLMES BLAKE

THE name *Myochrous* ( $\mu\omega\varsigma$ , mouse +  $\chi\rho\omega\mu\alpha$ , color) appears first in the DeJean Catalogue of 1837 (p. 438), with three specific names listed, all nomina nuda. In 1846, in the d'Orbigny Dictionary, the genus was mentioned, but it still remained a nomen nudum. Chevrolat stated that two of the three species listed were from Cayenne and one from the United States. In 1847 Erichson<sup>1</sup> adopted the name from DeJean's Catalogue and described a single species from Peru (*Myochrous immundus*), thereby validating the genus and fixing the type. In 1851 Blanchard<sup>2</sup> described four species from Chile, and in 1864 Philippi<sup>3</sup> two more from the same country. In 1856 Jacquelin DuVal<sup>4</sup> placed a Fabrician species (*Cryptocephalus dubius*), probably from St. Croix, in the genus. In 1858 Boheman<sup>5</sup> described a species collected on the voyage of the *Eugenia* at Rio de Janeiro, which he named *M. denticollis*, a name that had already been used by Say for a species of *Colaspis* from Missouri, which LeConte in 1859 assigned to *Myochrous*. Baly,<sup>6</sup> in 1865, in "an attempt at the classification of the Eumolpidae," gave a description of the subfamily Myochroini with a table of the genera, in which he included *Dictyneis*, *Myochrous*, *Glyptoscelis*, *Pachnephorus*, and *Eryxia*. To *Dictyneis*, a genus described

<sup>1</sup> Archiv für Naturg., vol. 8, p. 164, 1847.<sup>2</sup> In Gay, Historia física y política de Chile . . . , vol. 5, pp. 544-546, 1851.<sup>3</sup> Stett. Ent. Zeit., vol. 25, pp. 389-390, 1864.<sup>4</sup> In Ramón de la Sagra, Historia física, política y natural de la Isla de Cuba (Spanish ed.), vol. 7, pt. 2, pp. 124-125, 1856.<sup>5</sup> Kongliga Svenska Fregatten Eugenes Resa . . . , Insects, p. 616, 1858.<sup>6</sup> Journ. Ent., vol. 2, pp. 433-436, 1865.

in the above-mentioned article, he assigned the species of *Myochrous* described by Blanchard and Philippi, separating them from *Myochrous* because they are wingless, have the elytra soldered together at the suture, and are more gibbous and covered by tubercles. In the same year Baly<sup>7</sup> described three new species of *Myochrous*—*M. armatus* from Brazil, *M. explanatus* from Venezuela, and *M. sallei* from Mexico. Of the remaining species in the genus, two North American ones have been described by LeConte, five have been described in the *Biologia Centrali-Americana* by Jacoby, and one from Argentina by Brèthes. Recently Schaeffer has described three and Johnson one from the United States.

In 1947<sup>8</sup> I worked up the West Indian material in the Museum of Comparative Zoology and the National Museum collections, and in my study of these species I came to realize that the United States species were somewhat confused, particularly those closely related to the important economic species *M. denticollis* (Say). A Mexican species that invades southern Texas and New Mexico and a southeastern species have both gone under that name. In the *squamosus* group, furthermore, there were two other unrecognized species, and in California occurs another closely related to *M. longulus*. As for the Mexican and Central American species, nothing has been done since Jacoby's treatment of them in the *Biologia*. Many specimens of *Myochrous*, which are impossible to name because they are mostly undescribed species, are constantly being intercepted at ports of entry in shipments of fruit and vegetables. In studying the Central American species I included some South American ones, as some were common to both Central and South America. Since only five species have been described from South America, and since others were represented in both the Museum of Comparative Zoology and the National Museum collections, I have been tempted to describe the most distinct and well-marked species. Others, of which we have not sufficient material to warrant drawing up a description, I have left untouched. Undoubtedly many additional species exist throughout Central and South America that will turn up in future collections.

The genus is a difficult one because the species are so closely related. They are all similar in color, dark reddish brown or piceous black, and all are more or less densely covered by pale scales that hide the underlying sculpture, particularly that of the thorax wherein most of the differences appear. The genitalia, for the most part, are of the same general shape and in many, without close examination, seem much alike. In addition, there is considerable overlapping in the range. But after studying the material from both North and South

<sup>7</sup> Trans. Ent. Soc. London, ser. 3, vol. 2, pt. 4, p. 335, 1865.

<sup>8</sup> Blake, Proc. Ent. Soc. Washington, vol. 49, pp. 22-28, 1947.

America, I find that, as in other genera such as *Disonycha*, the species in many cases fall into fairly definite groups. As we come to know more about them, I am certain that this grouping will become even more evident. Because of the fragmentary knowledge of the genus in Central and South America the keys that I have drawn up for the species here described from those regions are bound to be inadequate. In the treatment of the Central and South American members, the species have been grouped according to apparent morphological characters rather than according to geographic distribution, insofar as it is possible.

In the United States, where I have recognized 13 species, the genus appears to be best represented in the Central and Southern States. There are two species occurring on the Pacific coast from the middle of California southward, and on the Atlantic seaboard there are three species that occur from Maryland southward. The rest are all from the central part of the country. One species, *squamosus*, ranges from the Great Plains of Canada, in Alberta and Saskatchewan, through Montana and the Dakotas south to Texas. The rest are found farther south, *movallus* and a new species in the Dakotas, *denticollis* from Iowa southward, and in Texas, the meeting point of Mexican and northern species, there are seven species.

In the Central American species the localities are too poorly indicated on most of the specimens to permit many deductions. A great many are labeled simply as found in shipments of fruit or vegetables from Mexico, Guatemala, or Honduras. In all, 11 species are recognized as occurring in Mexico and Central America. Of these, three are known to extend their range into the United States; 8 are recorded from Mexico. In the Canal Zone, where most intensive collecting has been done, 5 are known.

Two of the species found in the Canal Zone are represented in museum material from northern South America. Besides these two, there are 26 others recognized in this paper from South America. They occur from Colombia on the Pacific side down through Ecuador, Peru, and Bolivia to Chile, and on the Atlantic side from Venezuela and the Guianas, through Brazil, Paraguay, and Uruguay to Argentina.

In the West Indies the beetles have been taken in Cuba, Puerto Rico, Haiti, and Jamaica in the northern group of islands. Future collectors will probably find them on other islands. This group is quite distinct from any in North and South America. On each island is found a species closely related to but slightly different from the ones on the other islands. The specimens from the islands of Barbados, Grenada, and Trinidad belong to a species that is also found in the Guianas in South America.

*Myochrous* is one of 23 genera that are grouped together under the Myochroini and are chiefly characterized by being covered by scales or coarse hairs; in addition, the prothorax has a distinct margin, and the prosternum is lobed under the eyes. The two pairs of posterior tibiae are not emarginate except in the genus *Pachnephorus*, which in this regard unites the group with the Typophorini.

Only eight of the genera occur in the Western Hemisphere, and of these only three, *Glyptoscelis* LeConte, *Myochrous* Erichson, and *Colaspidea* Laporte, are from North and Central America. *Chalcosicya* Blake is confined to the West Indies. *Dictyneis* Baly, composed of a group of very odd wingless beetles with the elytra decorated with warts and tubercles, is known only from Chile. *Jansonius* Baly is a monotypic genus from Chile. *Trichochalcea* Baly and *Cellomius* Lefèvre are both monotypic genera from Brazil. The remainder of the group of genera is chiefly from Asia and Africa. *Pachnephorus* Redtenbacher is found also about the Mediterranean, and *Colaspina* Weise is a monotypic genus from Provence. One Australian genus, *Neocles*, Chapuis described as being the *Myochrous* of Australia. The description of the thorax with two big tubercles on the projected anterior margin together with a median sulcation sounds very much like that of the unique species *M. curculionoides* Lefèvre from northern South America.

In North America *Myochrous* comes nearest to *Glyptoscelis* and is distinguished from it by having the front tibiae and thorax usually toothed, the claws appendiculate, not bifid, and the elytra striately punctate.

*Myochrous* is composed of a fairly homogeneous lot of species. Yet in this natural group there are variations that suggest its close relationships with the other genera. For instance, some species of *Pachnephorus* occurring about the Mediterranean are not unlike some species of the *M. squamosus* group, which occur in the more arid regions of the United States. Like *Pachnephorus*, *M. squamosus* is without thoracic toothings and has broad, often bifid scales, but the shorter first abdominal segment and the lack of emargination of the hind tibiae place it definitely with *Myochrous*.

#### DESCRIPTION OF THE GENUS

From 3.5 to 9.5 mm. in length, usually stout, oblong, reddish brown, piceous, or black beetles, frequently shining with a bronzy luster when denuded of the usually dense and appressed grayish, pure white (in *M. sallei*), pale brownish, or yellowish scales that cover the entire upper surface, the lower surface less densely and more finely pubescent; beneath the scales the surface usually coarsely and the elytra striately punctate. Prothorax for the most part 3-toothed, antennae short,

not coming much below the elytral humeri and with thickened outer joints, anterior tibiae usually with an inner tooth, and posterior femora often bluntly toothed.

Head broad and rounded over the occiput, ordinarily roughly sculptured, with the punctures often in lines or wrinkles down the occiput, on each side nearly always a more pronounced ridge extending down above the eyes; frequently a depressed median line down the front; no transverse line between the eyes, the scales coming down to the antennal sockets and hiding the punctation beneath. Lower front short, the surface less scaly, with a few finer hairs, transversely placed, and the surface luster shining through; jaws large and powerful. Eyes widely separated, nearly entire, only lightly sinuate on inner side. Antennae not extending much below the humeri, very much the same throughout the genus, usually yellowish or reddish; the first and second joints swollen, second short, third a little longer than fourth, 3 to 6 more slender, 7 to 11 thicker, a little longer and hairy. Prothorax usually not so wide as the elytra, varying greatly in proportions, but most frequently wider than long and with three teeth along each side and a smaller tooth at apical and basal angles; lateral teeth varying greatly in prominence, sometimes heavy and wide, sometimes tiny, in some few cases, as often in *M. explanatus* Baly, simply an undulation of the margin; in one group (*squamosus*) these lateral teeth or angularities not pronounced and usually represented only by a rounded angle slightly behind the apical angle and sometimes another below the middle; in some groups the anterior margin produced over the head and thickened, and in one species (*M. curculionoides* Lefèvre) this thickening taking the form of two gibbosities. Upper surface of prothorax usually densely and often rugosely punctate, frequently with longitudinal ridgings, or the punctures at times dense, deep, and distinct, sometimes round, at other times elongate. Convexity and shape of the prothorax varying in different species, in some narrowly convex (*curculionoides* group), in others only moderately rounded, and in still another (*explanatus* Baly), with the margins dilated and flat; frequently a depression along the basal margin, most marked over the scutellum. Scutellum small, lightly scaly. Elytra oblong, with parallel sides and small humeri, the margin about the humeri often quite serrate, this serration in the *curculionoides* group extending all along the margin; a short intrahumeral sulcus and usually a little depression behind the basal callosity that is often on either side of the scutellum; surface densely, coarsely, and sometimes rugosely striate-punctate, with ridges or wrinkles often across the basal half; usually densely covered with scales, these scales varying greatly in size and shape, from short, broad, and closely appressed to long, curved, coarse, hairlike scales, usually at least two different kinds on

the upper surface of a single specimen, one short and inconspicuous beneath the longer and often broader outer scale. In certain species, such as *squamosus* LeConte and *rhabdotus*, new species, the scales as broad as long, and in *squamosus* with a suggestion of being bifid, as in the genus *Pachnephorus*; in other cases truncate. Body beneath usually less densely covered with finer scales especially on the mesosternum, metasternum, and abdomen, so that the surface shines through, on the sides of the prosternum the scales thicker and like those on the prothorax. Prosternum widely lobed below the eyes; punctation of the breast and abdomen, on the first segment especially, variable, from finely and sparsely punctate to coarsely, even rugosely punctate. Tip of the abdomen in the male usually with a triangular depression, in the female a deep rounded pit, though sometimes no depression whatever (*squamosus* group), and in the male only a faint one. Legs stout, not very long, shining, coarsely punctate with a scale from each puncture, the posterior femora more or less distinctly and bluntly toothed in most species; anterior tibiae usually with a tooth on the inner side near the apex, and in the male a tooth at the apex on the inner side of the tibiae of the anterior pairs of legs; in two species, the middle tibiae and, in the male, the posterior tibiae with a spur before the apex; tibiae ridged and at apex dilated, the claws appendiculate, not toothed. Aedeagus a typical eumolpid structure in outer shape, being simply curved and with a somewhat variably pointed tip, in the North American species not showing much variation except in the *squamosus* group, in which the pointed tip is exceedingly short and small, in the Central American and still more in the South American species this organ often presenting considerable differences in size and shape; in one group the tip broadly hollowed out, as a scoop; in a Trinidad species the aedeagus broad, heavy, and truncate with a tiny tip in the middle, and in a Brazilian species the tip drawn out into a long narrow point.

The groups into which the species seem to fall naturally are here arranged according to the external appearance coupled with the shape of the aedeagus. The widely distributed Mississippi Valley species, *M. denticollis* (Say), for instance, has close relatives in southern Texas and Mexico (*M. cyphus*, new species, and *M. austrinus*, new species) and farther south in southern Mexico and Central America (*M. carinatus* Jacoby and *M. melancholicus* Jacoby), the last two being larger and more coarsely punctate and in general more divergent in outward appearance, but possessing an aedeagus that is of essentially the same shape. The common species west of the Mississippi Valley from Alberta to Texas, *M. squamosus* LeConte, has three close relatives, *M. intermedius*, new species, *M. severini*, new species, and *M. pauwillus* Schaeffer, the last found only in the area around Browns-

ville, Tex. This group is unique in not having a toothed prothorax. The aedeagi of *intermedius* and *severini* are strikingly alike, and the chief differences in the group are in the scales and punctation. On the Pacific coast are two closely related species, *M. longulus* LeConte and *M. whitei*, new species, differing from the others in their slender shape and long, wide scales. About the Gulf of Mexico are three reddish-brown species, *M. floridanus* Schaeffer, which goes as far north as Virginia, *M. magnus* Schaeffer, from Texas and Mexico, and *M. tibialis* Jacoby, whose range extends from Mexico to Panama. These three also have similarly shaped aedeagi. In the northern islands of the West Indies are species from Cuba, Puerto Rico, Jamaica, and Haiti that vary a little from each other much as do the species in the *squamosus* group. From the southern islands of Barbados, Grenada, and Trinidad comes a species, *M. barbadensis* Blake, that is found in northern South America and has close relatives in Central America (*M. coenus*, new species, from Panama, and *M. femoralis* Jacoby, from farther north in Mexico, Guatemala, and Honduras). These species all have a thorax covered with round deep punctures and an aedeagus with a broad apex and a short, broadly rounded point. In Panama is a species having an aedeagus with a peculiar scooplike tip unlike any other, and in Peru and Ecuador occurs a beetle with a similar sort of structure. Externally the two beetles are very much alike in shape and in having a very densely and coarsely punctate surface. In South America, where the genus takes on unusual characters, there is a group of three species of which *M. curculionoides* Lefèvre is the most aberrant. This has two pronounced elevations on the anterior margin of the thorax that elsewhere in the group is greatly thickened. All three species differ from the others in having a narrowly convex thorax, elytra with unusually distinct basal callosities, and a pale band of scales at the apex. Still another group is composed of three small mottled species, all very much alike. The first ranges from Mexico through the Canal Zone to northern Colombia, the second is found along the northern coast of South America through the Guianas and Venezuela to Brazil, and the third occurs in Bolivia and Paraguay.

In North America there are very few species, aside from the *squamosus* group, that stand out as being very unusual. *M. ranella*, new species, with its heavy, pinched-in thorax, is mildly unique. In Central America there is more divergence in the genus. But in South America are found most strikingly different beetles, and up to the present, at least, many of them quite unlike any others. Such are *M. explanatus* Baly, the largest and flattest of the genus; *M. armatus* Baly, another large one with an extraordinarily long slender point on the aedeagus; *M. bolivianus*, new species, a queer chunky species,

*M. rhabdotus*, new species, and *darlingtoni*, new species, with distinct scale color patterns; and lastly, the type of the genus, *M. immundus* Erichson, quite unlike any other in having long, hairlike scales and almost untoothed anterior tibiae.

#### LIFE HISTORY

The life history of only one species, the southern corn leaf-beetle, *M. denticollis* (Say), has been studied, and in this case over a period of 6 years by E. O. G. Kelly, of the Cereal and Forage Crop Insect Investigations, who in 1915 published his results as Bulletin 221 of the United States Department of Agriculture. In this are given descriptions of egg, larva, pupa, and feeding habits. Since this is the only account of the life history of any of the species, a short summary is here given:

The egg is small, oval, pale yellow, smooth and slightly glistening, about 0.036 inch in length and 0.015 inch in diameter. The female deposits her eggs in clusters of 10 to 50 in the crevices of earth or hollow straws near the corn plants. The eggs, depending on temperature, hatch in 6 to 10 days. They are laid early in April in northern Texas and to the middle of May in Kansas. The newly hatched pale yellow larva is about 1 mm. in length, nearly cylindrical, and with a somewhat flattened posterior end. The head is a little broader than the thorax and covered with downy hairs. Later the larva becomes creamy white. The mature larva is 6 to 8 mm. in length and 2 mm. in diameter. The larvae are found in the soil of cornfields in small earthen cells 4 to 6 inches deep with a tiny burrow leading toward the corn roots. Only in "dark waxy bottom land which becomes very gummy and sticky during wet weather and very hard in dry" were the larvae found. From about the middle of July to the middle of August the larvae in Kansas were pupating, and adults emerged from the first of August on in that area. They did considerable damage feeding on the unripe corn before going into hibernation in early fall. Early in spring the beetles attack young seedling corn crops and others.

Dr. W. H. Anderson, of the Bureau of Entomology and Plant Quarantine, has made a special study of the larva for me and has compared it with the larvae of related genera, and his description is here given:

#### DESCRIPTION OF THE FULL-GROWN LARVA

"The brief characterization by Kelly<sup>9</sup> and the figures that accompany it are nearly sufficient for distinguishing larvae of the genus *Myochrous* from other eumolpine larvae. However, larvae of other

<sup>9</sup> U. S. Dept. Agr. Dept. Bull. 221, p. 4, 1915.

genera of the Eumolpinae, not known to Kelly, have been discovered and some additional remarks are necessary for a more adequate characterization.

“Abdominal segments II to VII each with a pair of elongate, ventral, ambulatory processes, each process obviously longer than its diameter at base and bearing stout setae on its inner surface, one of the setae at apex of process much longer than any of the others. Lateral anal lobes with the posterior surface sclerotized, flat and broad, each lobe divided by a transverse groove into two parts, the anterior (or ventral) part shorter than posterior part. Dorsal anal lobe enlarged, with the posterior surface flat, semicircular in outline. Dorsal and dorsolateral surfaces of mesothorax, metathorax, and abdominal segments I to VII with abundant, fine, elongate asperities. Posterior dorsal fold on abdominal segments I to VII with two pairs of slender setae. Dorsal surface of abdominal segments VIII and IX with approximately the same number of setae as on the corresponding areas of the anterior segments.

“Description based upon the following material: *Myochrous denticollis* (Say), Wellington, Kans., E. G. Kelly collector, Webster No. 6551; Monarch, Mo., June 1925, H. E. Roberts collector. None of the larvae in this material is in good condition. *Myochrous* sp., Las Cruces, N. Mex., September 20, 1943, at roots of sweetpotato.

“Larvae of *Myochrous* are most closely related to those of *Glyptoscelis* in so far as is known at present. The more readily discernible characters for separating larvae of the two genera are found at the posterior end of the body. Larvae of *Glyptoscelis* have the anterior (or ventral) part of each lateral anal lobe approximately twice as long as the posterior part and the dorsal surface of abdominal segments VIII and IX with many more setae than the corresponding areas of the anterior segments. Larvae of *Chrysochus*, while not as closely related to those of *Myochrous* as are those of *Glyptoscelis*, resemble larvae of *Myochrous* particularly in the presence of elongate ambulatory processes. Larvae of *Chrysochus* have many setae on the dorsal surface of the abdominal segments and the dorsal anal lobe is not flattened posteriorly.” (W. H. ANDERSON.)

In general, the natural habitat of most of the species seems to be along marshy shores where they undoubtedly live in reeds and grasses. Even as adults they spend much time below the surface. Museum specimens are often caked with dried mud that clings to the scales and is difficult to remove without scraping off the scales. The beetles are active and strong fliers, however, as they have been collected on airplane flights. P. A. Glick,<sup>10</sup> in his experiments in collecting insects

<sup>10</sup> Distribution of insects, spiders, and mites in the air. U. S. Dept. Agr. Techn. Bull. 673, p. 69, 1939.



6. From 3.5 to 5 mm. in length; aedeagus with a not very acute tip (San Joaquin Valley, Calif.)----- *whitei*, new species
- From 4.5 to 5.5 mm. in length; aedeagus with a fine acute tip (southern California, Arizona, Colorado, Idaho)----- *longulus* LeConte
7. Body reddish brown or coppery, covered by yellowish or pale brownish scales, sometimes mixed with darker brown----- 8
- Deep piceous, often with bronzy luster, covered by grayish scales mixed with darker brown ones----- 11
8. Large, 6 to 8 mm. in length, unusually finely punctate, often having a median depression on anterior edge of prothorax (Brownsville, Tex., and along lower Mississippi; Mexico)----- *magnus* Schaeffer
- Smaller, 4 to 6 mm. in length----- 9
9. Prothorax almost as long as wide, uneven with depressions, scales very dense and curved, tip of aedeagus prolonged into a slender point (Iowa, South Dakota, Kansas, Missouri)----- *movallus* Johnson
- Prothorax distinctly wider than long, without depressions----- 10
10. Deep reddish brown, prothorax very rugose, with deep, coarse punctures and with no depressions except along basal margin (Virginia to Florida and west to Louisiana)----- *floridanus* Schaeffer
- Not quite so large and with less rugose prothorax, punctures not so coarse and distinct; aedeagus with a sharper tip (Columbia, Tex.)----- *floridanus texanus*, new subspecies
11. Prothorax large, approximately as wide as elytra, pinched in conspicuously behind eyes and depressed along basal margin; beetle relatively short and broad (Virginia southward and along Gulf to Louisiana)----- *ranella*, new species
- Prothorax not so heavy and not conspicuously pinched in behind eyes; beetle more slenderly oblong----- 12
12. Scales on elytra rather fine and not so dense as to hide punctation below; prothorax without any pronounced median convexity (Mississippi Valley from Iowa to northern Texas, and from Maryland to Georgia and along Gulf coast)----- *denticollis* (Say)
- Scales on elytra dense; prothorax with a median convexity----- 13
13. Elytral scales curved, not appressed; prothorax coarsely punctate (Arizona)----- *austrinus*, new species
- Elytral scales appressed, prothorax very finely punctate (southern Texas, New Mexico, Mexico)----- *cyphus*, new species

MEXICO AND CENTRAL AMERICA

1. Deep reddish brown or coppery brown----- 2
- Piceous or black, usually with a bronzy luster----- 4
2. Thorax very densely and finely punctate, covered with dense yellowish scales (southern Texas and area below Brownsville in Mexico, and along lower Mississippi)----- *magnus* Schaeffer
- Thorax not very densely or very finely punctate----- 3
3. Large, 7 to 8 mm., covered with short white scales (Mexico)----- *sallei* Baly
- Smaller, 5 to 7 mm., covered by yellowish or pale brownish scales (Mexico, Guatemala, Honduras, Nicaragua, Panama)----- *tibialis* Jacoby
4. Small, 4.5 to 5 mm., aedeagus pale with a fine dark line down middle of tip (Panama)----- *elachus*, new species
- Larger, 5 to 6 mm----- 5
5. Aedeagus with a hollowed-out scooplke tip (Panama, Colombia).  
*platylonchus*, new species
- Aedeagus not scoop-shaped at tip----- 6

6. Thorax nearly as long as wide, rather flat, not densely punctate or very densely covered by scales, especially over head (Mexico).  
*melancholicus* Jacoby  
 Thorax definitely wider than long, densely punctate and densely covered by scales..... 7
7. Punctuation of thorax not coarse but dense and confluent, a convexity in middle of thorax..... 8  
 Punctuation of thorax coarser and distinct, not very often confluent, no pronounced convexity in middle of thorax..... 9
8. Punctuation of thorax exceedingly fine and in lines, the punctures not at all distinct; aedeagus short (southern Texas and New Mexico and region south of that in Mexico)..... *cyphus*, new species  
 Punctuation of thorax coarser, but still confluent and of indistinctly formed punctures; aedeagus longer (southern Arizona, Sinaloa, Mexico)..... *austrinus*, new species
9. Aedeagus tapering at tip; thorax with elongate punctures, tending to be in lines, sometimes confluent (Mexico)..... *carinatus* Jacoby  
 Aedeagus broadly rounded with a short, broad point..... 10
10. Thorax covered evenly by dense, deep, round punctures (Honduras, Guatemala, Nicaragua)..... *femoralis* Jacoby  
 Thorax with less regular punctuation, the punctures becoming coarser in basal portion; aedeagus smaller (Panama) -- *coenus*, new species

## SOUTH AMERICA

1. Middle tibiae and in male posterior tibiae with a spur before apex..... 2  
 Middle tibiae and posterior tibiae without spur before apex..... 3
2. Black, elongate, elytra usually more than twice as long as prothorax (Bolivia)..... *calcariferus*, new species  
 Deep reddish brown to piceous, elytra usually not more than twice as long as prothorax or even less (Venezuela)..... *spinipes*, new species
3. Clothed with long hairlike scales; only a faint trace of toothing on anterior tibiae (Peru, Chile)..... *immundus* Erichson  
 Not clothed with long hairlike scales; usually with a tooth on anterior tibiae..... 4
4. Apex of elytra with a band of pale scales..... 5  
 Apex of elytra without a band of pale scales..... 7
5. Anterior margin of thorax with a pair of gibbositities separated by a deep groove; anterior pair of tibiae not toothed (Brazil).  
*curculionoides* Lefèvre  
 Anterior margin of thorax thickened but not gibbose; anterior pair of tibiae toothed..... 6
6. Large, 7.5 mm.; elytra very wrinkled with irregularly shaped, often stellate punctures (Cayenne)..... *leucurus*, new species  
 Smaller, 6 to 7 mm.; elytra not very wrinkled, with small round punctures (Cayenne)..... *crassimarginatus*, new species
7. Each elytron faintly trivittate; aedeagus broad, almost truncate at apex with a small tip in middle (Trinidad, Brazil).  
*rhabdotus*, new species  
 Elytra not trivittate; aedeagus not truncate..... 8
8. Large, 8 to 9.5 mm.; thorax with flattened sides usually undulate, sometimes toothed (Venezuela, Colombia, Bolivia)..... *explanatus* Baly  
 Smaller; sides of thorax not flattened..... 9

9. Thorax with a thickened anterior margin, the scales on elytra forming either short vittae or pale spots or band from the humerus down toward the suture----- 10  
 Thorax usually not with a thickened anterior margin; elytra with no definite pale spotting or banding----- 12
10. Thorax as long as wide, with a white median stripe, and elytra with a long incurving band from humerus toward suture and a band before the apex not reaching the suture; aedeagus with a broadly pointed tip (Colombia)----- *darlingtoni*, new species  
 Thorax wider than long, almost as wide as elytra----- 11
11. Elytra reddish brown with the scales forming a spot below basal callosity in the center, sometimes connected with the pale spot on humerus, another in line with this before the apex and sometimes another on the side; aedeagus broad with very little trace of an acute tip at apex (Bolivia)----- *bolivianus*, new species  
 Elytra black with the white scales forming vittate or semivittate markings (Chaco Province, Argentina)----- *chacoensis*, new species
12. Aedeagus with a hollowed-out scooplike tip----- 13  
 Aedeagus not with a scooplike tip----- 14
13. Scales not so dense as to conceal punctation (Panama, Colombia).  
*platylonchus*, new species  
 Scales denser, concealing punctation; tip of aedeagus not quite so broad (Ecuador, Peru)----- *geminus*, new species
14. Aedeagus with a long drawn-out tip----- 15  
 Aedeagus not with an unusually long drawn-out tip----- 19
15. Deep reddish brown, thorax approximately as long as wide with small inconspicuous lateral teeth----- 16  
 Piceous, thorax not as long as wide, with the usual well-developed teeth----- 17
16. Large, 6.5 to 7 mm. (Salta, Jujuy, Argentina)----- *monrosi*, new species  
 Smaller, 5 mm. ("Pampas," Argentina)----- *stenomorphus*, new species
17. Large, 6 to 7 mm., tip of aedeagus very long drawn out (Brazil, Uruguay, Argentina, Chile)----- *armatus* Baly  
 Smaller, 5.5 to 6.5 mm., tip of aedeagus not so long drawn out----- 18
18. Thorax approximately as wide as elytra (Trinidad)----- *bryanti*, new species  
 Thorax not so wide as elytra (Paraguay)----- *sapucayensis*, new species
19. Length 4 to 5 mm----- 20  
 Length 5 to 6 mm----- 22
20. Aedeagus pale with a dark furrow down tip (Panama, Colombia).  
*elachus*, new species  
 Aedeagus without a dark furrow down tip----- 21
21. Elytra sparsely striate-punctate (Bolivia, Paraguay)----- *nanus*, new species  
 Elytra with usual rather dense striate punctation (British, French, and Dutch Guiana, Venezuela, Brazil)----- *paulus*, new species
22. Upper surface covered by unusually wide scales (Colombia).  
*latisetiger*, new species  
 Upper surface not covered by unusually wide scales----- 23
23. Reddish brown; aedeagus tipped with a fine point at apex----- 24  
 Piceous; aedeagus tipped with a broad point at apex----- 26
24. Covered by grayish or pale brownish scales, the reddish-brown color not showing through; thorax much wider than long, finely punctate (Colombia, Peru, Venezuela, Brazil, Bolivia)----- *longipes*, new species  
 Covered by short yellowish scales, the reddish-brown color showing through----- 25

25. Prothorax with anterior margin projecting over head, surface densely but not coarsely punctate (Bolivia)----- *mamorensis*, new species  
 Prothorax with anterior margin not projecting over head, coarsely but not very densely punctate (Amazon Valley, Brazil).

26. Thorax densely and coarsely punctate (Paraguay)----- *brunneus*, new species  
 Thorax not very densely punctate (Barbados, Grenada, Trinidad, British and Dutch Guiana)----- *normalis*, new species  
*barbadensis* Blake

*M. figueroae* Brèthes is not included in this key, since no male specimens have been available. The beetle resembles *M. armatus* Baly but has not so large a thorax.

#### MYOCHROUS DENTICOLLIS (Say)

##### PLATE 1, FIGURE 1

*Colaspis denticollis* SAY, Journ. Acad. Nat. Sci. Philadelphia, vol. 3, p. 448, 1824.  
*Myochrous denticollis* LECONTE, Writings of Thomas Say, vol. 2, p. 215, 1859.

From 4 to 5.5 mm. in length, broadly oblong, black with a bronzy luster, moderately lightly covered by narrow brownish and white scales. Prothorax broadly rounded and without marked convexities, with a little depression over the scutellum and a 3-toothed margin; surface with fine lines of dense, confluent, and shallow punctures; elytra with coarse, dense, and, in basal half, contingent punctures in rows visible through the scales.

Head down to antennal sockets covered by scales completely hiding the punctation, a narrow ridge extending down on each side of occiput, the punctation beneath the scales in fine lines radiating from a shallow median vertical depression; lower front between the antennal sockets shining under the light, white pubescence, the scales here becoming less dense and more hairlike, each one coming from a coarse puncture; punctures here not quite so dense and producing a wrinkled effect across lower front. Antennae not extending much below humeri, a little shorter in the female, reddish brown, joint 1 broadly cylindrical, joint 2 globular, joints 3 to 6 slender, shining, 7 to 11 thicker and densely pubescent. Prothorax considerably broader than long, broadly rounded but not very convex, with a little depression at base over the scutellum, sides with three teeth and a tooth at apical and basal angles; punctation visible through the scales, dense and confluent, in fine, shallow, longitudinal lines. Elytra only a little wider than prothorax, moderately convex, humeri prominent with short intrahumeral depression, the rows of punctures close in the basal half, but the punctures becoming finer and less dense toward the apex; scales not so dense as to hide the punctation, narrow and somewhat curved, not lying flat, the scales from the middle of the punctures narrower and smaller and lying more appressed to the surface. Body beneath shiny, not so densely scaly, coarsely punctate

with a more hairlike scale from each puncture, the scales on the prosternum like those on the upper surface. A small depression at the tip of the abdomen in both sexes, roundish in the female, more triangular in the male. Hind femora bluntly toothed, anterior tibiae toothed on the inner side. Length 4.2 to 5.5 mm.; width 2 to 2.5 mm.

*Type*.—Unknown.

*Type locality*.—"Inhabits Missouri."

*Other localities*.—MARYLAND: Chesapeake Beach, Plumpoint (in thicket of reeds near the beach); VIRGINIA: Alexandria, Fredericksburg, Fort Monroe, Nelson County, Nutbush; DISTRICT OF COLUMBIA: Rock Creek Park; WEST VIRGINIA: Ripley, White Sulphur Springs; NORTH CAROLINA: Clemson College; GEORGIA: Miner; OHIO: Marietta; INDIANA: Paxton (on corn), Vincennes; KENTUCKY: Glasgow, Henderson; TENNESSEE: Clarksville, Henderson; ALABAMA: Montgomery; MISSISSIPPI: Clarksville, Grenada (on turnip), Hancock County, Meridian; Natchez (on *Ambrosia psilostachya*), Rockport, Vicksburg; LOUISIANA: Alexandria (on cotton boll), Ama (feeding on okra), Bunkie (on cotton), Caddo Parish, East Port, Gueyden, Houma (in sugarcane sheath), Lafayette (in stem of sugarcane), Many, New Orleans (on globe artichoke), Opal, Palm, Madison Parish, St. James, Shreveport (on cotton square), Southport (in sugarcane fields); Tallulah (on cotton), Vidalia; TEXAS: Clarksville (on *Helenium* roots), Dallas, Greenville, Mesquite, Plano, Raymondville, Utopia, Wolfe City (on *Helenium tenuifolium*); ARKANSAS: Beebe, Conway, Oil Trough, Scott County, Paris, Pine Bluff (on cotton), Texarkana; OKLAHOMA: Medford, Oklahoma City, El Reno, Tulsa County; KANSAS: Douglas County, Leavenworth, Onaga, Riley County, Washington County (in cornfield, many specimens), Wellington; MISSOURI: Bellflower, Columbia, Charleston, Oran, St. Louis; IOWA: Appanoose County, Davis County, Decatur County, Jefferson County, Lee County, Page County, all from "B. Blue stem."

*Remarks*.—Although there are two species occurring in the region from which Say described *Colaspis denticollis*, it seems likely that the species that is abundant throughout this area should be the one he collected rather than the species that is rare in collections and that was described much later in 1931 from North Dakota (*Myochrous movallus* Johnson). Horn, in describing Say's species, writes that the scales are not closely placed and permit the bronze color to be readily visible. This description does not apply to *M. movallus*, which is more densely covered by broader scales. In the species that is abundant, which is probably Say's species, the scales are narrow and not very dense. In fact, *denticollis* is one of the least densely pubescent of any of the North American species of *Myochrous*. Furthermore, the thorax is broad and not very convex, in contrast with other

species, and the rows of striate punctures on the elytra are more crowded.

*M. denticollis* appears to be found most abundantly in the central Mississippi Valley. It occurs as far north as Iowa and Illinois and is found in collections from Kansas, Missouri, Oklahoma, Arkansas, and south into northern Texas, Louisiana, and Mississippi. Less common are specimens from Kentucky and Tennessee, and there are comparatively few specimens from West Virginia, Virginia, Maryland, North Carolina, and Georgia. I have found it on the edge of a thicket of reeds, at Plumpoint, Md., where the beetles were not very abundant and seemed to spend much of their time out of sight in the sand around the roots of the reeds.

Because the beetles are injurious to young corn as well as to sugarcane and other garden crops, this species has become well known in economic literature as the southern corn leaf-beetle. As early as 1887 in a report of the United States Commission on Agriculture, Riley<sup>11</sup> reported it as a pest. Webster<sup>12</sup> in 1900 to 1901 gave several accounts of its destructiveness in Ohio to seedling corn. Tucker<sup>13</sup> called attention to a serious outbreak in Butler County, Kans., which necessitated the replanting of "hundreds of acres of corn." Farther south in Louisiana and Mississippi it has been found injuring cotton and also sugarcane. An unusually full account of the immature stages and life history has been given by E. O. G. Kelly<sup>14</sup> in connection with its destructiveness to corn.

A series of specimens sent from Mexico as injuring corn at Perjamo, Guanajuato, August 30, 1909 (sent by Julio Reguelma), cannot be distinguished from the North American specimens of this species.

**MYOCHROUS CYPHUS, new species**

PLATE 1, FIGURE 3

From 4 to 6 mm. in length, oblong, piceous, shining with a bronzy luster; prothorax with a 3-toothed margin, a depression along the base, and a median convexity, the rows of elytral punctures not so closely placed as in *denticollis* and the scales coarser, denser, and concealing more the punctation below.

Head covered by dense scales down to antennal sockets, a more or less distinct median line, the punctation dense and fine and radiating from the middle in lines, a ridge on each side of occiput. Lower front rather less densely and not very coarsely punctate, with a fine scale from each puncture. Antennae yellowish or reddish, and of the usual proportions. Prothorax not so long as wide, with a prominently 3-

<sup>11</sup> Rept. U. S. Comm. Agr., 1887, p. 150.

<sup>12</sup> U. S. Dept. Agr., Div. Ent. Bull. 26, new ser., 1900; Journ. New York Ent. Soc., vol. 9, pp. 128-132, 1901.

<sup>13</sup> U. S. Dept. Agr. Yearbook, 1905, p. 634.

<sup>14</sup> U. S. Dept. Agr. Dept. Bull. 221, pp. 1-11, 1915.

toothed margin and a tooth at apical and basal corners and a moderate depression along basal margin and well-marked median convexity; surface finely, densely, and confluent punctate in longitudinal lines. Elytra a little wider than prothorax with small humeral prominences and a short intrahumeral sulcus; the rows of punctures not quite so crowded together as in *denticollis* and more densely covered by scales, the scales being not so fine, in well-marked specimens the brown-and-white scales tending to form short stripes. Body beneath shining, dark brown with a bronzy luster, tip of abdomen usually reddish, the scales on breast and abdomen not so thick and finer; first abdominal segment coarsely and moderately densely punctate. Hind femora with a blunt tooth, anterior tibiae with the usual inner tooth. Length 4.1 to 6 mm.; width 1.9 to 2.8 mm.

*Type and paratypes*.—Type male and 38 paratypes, U.S.N.M. No. 59030, collected by R. A. Vickery on corn; 2 paratypes in Museum of Comparative Zoology.

*Type locality*.—Brownsville, Tex.

*Other localities*.—TEXAS: Abilene, Taylor County, Anahuac, Alligator Head, Calhoun County, Austin (on Irish potatoes), Los Borregos and Fort Brown in Brownsville (on cotton), Buckeye, Matagorda County (on flooded rice), Canutillo (on corn), Carmine, Catarina, Catulla, Columbus, Corpus Christi, Del Rio, Edinburg, El Paso, Fort Davis, Gregory, Hearne (on cotton), Hidalgo (in sugarcane stalk), Jim Wells County, Kerrville, Kingsville (on wheat), Lufkin (on cotton), New Braunfels, Raymondville, Sugar Land, Trinity (on cotton), Utopia (on corn), Victoria (on corn and cotton), Wellborn, Weslaco, Yaleta; NEW MEXICO: Las Cruces, Mesilla Park, Socorro.

*Remarks*.—This species is very easily confused with *denticollis*. It differs from it in having not a flattish prothorax but one in which there is a distinct median hump. In general it is a more slender species and has a denser vestiture of thicker scales than *denticollis*, and the elytral punctures are not so crowded. The aedeagus, while resembling that of *denticollis*, is larger and longer. It is undoubtedly a Mexican species that does not extend farther than the southern part of Texas. It has been frequently intercepted in shipments of bananas, pineapples, sugarcane stalks, avocados, and tomatoes from Mexico. Usually no definite localities for its occurrence in Mexico can be obtained, but from two, Matamoros, taken on cotton, and Ciudad Mante, Tamaulipas, on tomato, it would appear to be found in the region just south of Brownsville. There is also one specimen in the Bowditch collection, Museum of Comparative Zoology, which Jacoby had put under *M. melancholicus* and which comes from Paso del Norte, Chihuahua, Mexico, a region south of New Mexico.

## MYOCHROUS AUSTRINUS, new species

## PLATE 1, FIGURE 5

About 5.5 mm. in length, elongate oblong, shining piceous with a bronzy luster, prothorax 3-toothed and rather convex, as in *M. cyphus*, with dense, often confluent, moderately coarse punctation, the brown and white scales not so dense as to hide completely the sculpture, and not closely appressed but curving.

Head densely covered with scales to antennal sockets, the punctures beneath coarse and dense; in some specimens traces of a median line down front, the usual occipital ridge on either side. Antennae yellowish or reddish, of the usual proportions. Prothorax wider than long, conspicuously 3-toothed on lateral margin with a tooth at apical and basal angles; disk with a median convexity and a basal depression along the margin, most pronounced over the scutellum; punctation moderately coarse and confluent, in longitudinal lines, not entirely concealed by the yellowish-gray scales. Elytra with small humeral prominences and a basal callosity with a depression below in which the punctures are transversely ridged; punctures coarse and closely placed, becoming much finer and less dense toward apex; scales not entirely concealing punctation, not very coarse or closely appressed but curved. Body beneath shining with a bronzy luster beneath the rather fine white scales, tip of abdomen reddish, first abdominal segment moderately coarsely and densely punctate. Hind femora bluntly toothed, anterior tibiae with the usual inner tooth. Length 5 to 5.8 mm.; width 2.2 to 2.3 mm.

*Type*.—A female, U.S.N.M. No. 59027, collected at 2,300–2,500 feet, July 13 to 15, by H. F. Wickham.

*Type locality*.—Tucson, Ariz.

*Other localities*.—ARIZONA: San Bernardino Ranch, Cochise County, 3,700 feet (F. H. Snow; two specimens in Snow collection at Kansas University, one specimen in the Museum of Comparative Zoology at Cambridge).

*Remarks*.—At first glance this species might be confused with *M. cyphus* because of the slight convexity on the thorax. The curved and not closely appressed scales and the more coarsely punctate thorax distinguish it from that species. This may very well be a Mexican species slowly extending into Arizona. A series of specimens from Los Mochis, Sinaloa, Mexico, collected by C. T. Dodds on June 27, 1922, in the collection of the California Academy of Sciences, appears to be the same as the Arizona specimens. There is, unfortunately, no male among the four Arizona specimens for comparison of the aedeagi. A drawing of the aedeagus of a male from Los Mochis, Mexico, is given, showing it to be similar to both *M. cyphus* and *M. denticollis* in the structure of the soft membranes, but larger than either. There

is also considerable resemblance to the southern Mexican species, *M. carinatus* Jacoby, but the thorax is more convex and has denser, more confluent punctures than does that species.

MYOCHROUS MELANCHOLICUS Jacoby

PLATE 1, FIGURE 4

*Myochrous melancholicus* JACOBY, *Biologia Centrali-Americana*, Coleoptera, vol. 6, pt. 1, p. 174, 1882.

*Myochrous carinatus* JACOBY, in Bryant, *Ann. Mag. Nat. Hist.*, ser. 9, vol. 12, p. 137, in part, 1923.

About 5 mm. in length, elongate oblong, rather flat, shining black beneath the pale closely appressed scales, scales on head unusually fine, showing punctation beneath; punctation on thorax not confluent or ridged, the punctures separate and not very coarse; thorax only a little wider than long.

Head compared with other species rather bald, the scales unusually fine over the occiput, a bit coarser behind the eyes; the sculpture plainly visible, consisting of rugose, irregular punctures and the usual ridges on either side of the occiput. Antennae of the usual proportions. Prothorax a very little wider than long with a 3-toothed margin, not very convex, a faint depression on either side below the middle and a well-marked depression along the base, especially over the scutellum; punctures not so dense or coarse as in *carinatus* and not in lines, denser and larger toward the base; scales not very thick. Elytra only slightly convex, without basal callosities, a faint transverse depression in basal half in which there is a tendency to transverse ridging; punctures well spaced, not very coarse except about scutellum; scales easily rubbed off but apparently not dense, rather coarse and pale. Body beneath having the first abdominal segment with small scattered punctures. Hind femora bluntly toothed, anterior tibiae with the usual inner tooth. Length 5.2 mm.; width 2.3 mm.

*Cotype*.—In Bowditch collection, Museum of Comparative Zoology; ? cotypes in British Museum of Natural History.

*Type locality*.—In an endeavor to exclude other species that may be included in Jacoby's material, I hereby designate Córdoba, Mexico, Sallé collection, as the type locality.

*Remarks*.—There was some confusion in Jacoby's understanding of *Myochrous melancholicus*. In his original description he gives the following localities: Córdoba, Texpam (Sallé), Playa Vicente (Höge), Panama (coll. Jacoby). In the Supplement (1891) he adds Villa Lerdo in Durango, Cholula in Puebla, and Frontera in Tabasco (Höge). In the Bowditch collection at Cambridge are further specimens from Jacoby's collection containing two additional localities—Paso del Norte, Chihuahua, and Acapulco, Mexico. Of Jacoby's specimens mentioned in the *Biologia* I have examined specimens from

Córdoba, Panama, and Frontera in Tabasco. One from the last-named locality was sent to me from the British Museum and identified as *carinatus* by Bryant, who synonymized *melancholicus* with *carinatus*. The result of dissection shows that this specimen is *M. tibialis* Jacoby. The Córdoba and Panama specimens each represent different species. And the specimens from Paso del Norte and Acapulco are two more distinct species, making in all five species of those that I have examined that Jacoby placed under the name *melancholicus*. In view of this confusion I have selected the type locality as Córdoba, Mexico, in an endeavor to fix the species. This specimen from Córdoba, a male, is smaller and flatter than *M. carinatus* with less dense thoracic punctation having no tendency to be in confluent lines. The scales on the head are finer. The tip of the aedeagus is not so tapering, and the whole aedeagus is shorter.

MYOCHROUS CARINATUS Jacoby

PLATE 1, FIGURE 7

*Myochrous carinatus* JACOBY, Biologia Centrali-Americana, Coleoptera, vol. 6, pt. 1, Suppl., p. 230, 1891.

From 5 to 6 mm. in length, elongate oblong, shining with a bronzy luster through the yellowish-gray scales; scales somewhat curved and not hiding sculpture below entirely; prothorax a little wider than long, with moderately coarse, dense, somewhat elongate punctures tending to be in lines.

Head densely covered with scales down to antennal sockets, with the usual occipital ridge on either side of occiput (no more developed than in other species, however); punctation beneath the scales somewhat visible and tending to be in lines radiating from the vertex. Antennae reddish brown, of the usual proportions. Prothorax wider than long (contrary to Jacoby's statement), with three lateral teeth and the usual tooth at apex and base; punctation dense, moderately coarse, tending to be in lines, but not ridged; scales not flatly appressed but a little curved. Elytra with a little depression below the basal callosity, and transversely ridged especially in this depression; scales not so dense as to hide punctation, and short, curved, pale yellowish gray mixed with pale brown; elytral striae close, punctures touching each other in basal portion, with transverse ridgings. Body beneath with scattered punctures on the first abdominal segment, pubescence fine and pale. Hind femora with a blunt tooth, anterior tibiae with the usual tooth. Length 4.9 to 6.2 mm.; width 2.3 to 2.7 mm.

*Cotypes*.—In Bowditch collection, Museum of Comparative Zoology (3 specimens) and ? in British Museum of Natural History.

*Type locality*.—In an endeavor to exclude other species that may be included in Jacoby's material, I hereby designate the type locality as San Juan Bautista in Tabasco, Mexico, Höge collector.

*Remarks.*—Contrary to Jacoby's description the prothorax in the San Juan Bautista specimens is wider than long, and furthermore the ridges on the occiput are not any more developed than in the majority of the species. The prothorax is rather more finely punctate than in most Central American species of *Myochrous*, with a tendency for the punctures to be elongate and to occur in longitudinal lines. The aedeagus is more tapering than in *M. femoralis* or *M. melancholicus* and more like the North American species *M. denticollis*. A number of specimens of what seem to be this species have been intercepted in shipments of bananas from Mexico at New Orleans. Apparently it is abundant in certain banana-growing districts.

## MYOCHROUS SQUAMOSUS LeConte

## PLATE 2, FIGURE 1

*Myochrous squamosus* LeConte, Smithsonian Contr. Knowl., vol. 11, p. 24, 1859.

About 5 mm. in length, oblong, black, shining with a bronzy, sometimes bluish luster, covered by wide, flat, brown-and-white scales, in many specimens forming a white lateral elytral vitta, sometimes scales on elytra entirely pale, sometimes brown with several more or less interrupted white vittae; prothorax not definitely toothed but with an anterior angularity; elytral punctation not round but angular or star-shaped.

Head rounded over occiput and covered with scales down to antennal sockets, no trace of median depression or of the usual occipital ridges, punctation fine, dense and in lines; lower front shining under sparser, finer scales, with scattered punctures. Antennae reaching below humeri, reddish brown, of the usual proportions, outer joints thicker. Prothorax a little wider than long, widest anteriorly, and without lateral toothing but with an anterior angularity, a small tooth at apical and basal angles; punctation tending to be in confluent lines, but not so dense as in the other species of this group and without ridgings. Elytra with small humeri, a short intrahumeral depression, the rows of punctures not closely placed and punctures somewhat star-shaped, becoming much finer and less dense in the apical half; scales very broad and flat, covering punctation, rather easily rubbed off, forming various color patterns, sometimes entirely pale, usually brownish with a white lateral vitta and spot at apex, sometimes several broken vittae or spots. Body beneath shining with a metallic luster beneath the white scales, the scales on abdomen finer; first segment finely and rather densely punctate; abdomen of female without depressions, a faint triangular depression at tip of male abdomen; legs reddish brown. Hind femora without tooth, anterior tibiae with a small inconspicuous tooth on inner side. Length 4.3 to 5.5 mm.; width 2 to 2.5 mm.

*Type*.—A female in the LeConte collection, Museum of Comparative Zoology.

*Type locality*.—"Platte River [Kansas] under dried buffalo excrement."

*Other localities*.—ALBERTA: Chappice Lake, Medicine Hat; SASKATCHEWAN: Roche Percee; MONTANA: Big Horn County; WYOMING; NORTH DAKOTA: Medora; SOUTH DAKOTA: Avance, Belle Fourche, Browns Valley, Canning, Canton, Cedar Canyon, Chamberlain, Cheyenne Agency, Fort Thompson, Fox Ridge, Gettysburg, Highmore, Houghton, Kimball, Lantry, Martin, Newell, Oelrichs, Philip, Rapid City, Spearfish, White Lake; NEBRASKA: Columbus, Crete, Lincoln, McCook, West Point; IOWA: Council Bluffs, Sioux City; COLORADO: Colorado Springs, Fort Collins, Greeley, Las Animas, Pueblo; UTAH: Salt Lake; NEW MEXICO: Coolidge; KANSAS: Clark County, Gove County, Meade County; TEXAS: Dallas.

*Remarks*.—Of 231 specimens collected in June and July 1947 in South Dakota by H. C. Severin, only 9 were males. No male specimen had previously been found in all the collections examined. In his treatment of the Eumolpini in 1892, Horn mentioned that he had seen only females. The species has the broadest scales of any species of the genus in the United States. There is considerable variation in the color pattern formed by the scales, some beetles having the elytra entirely white, but the elytra are more commonly brown with a lateral white stripe and remnants of a median one, frequently abbreviated to spots or an apical vitta. The scales appear bifid at times as in the European genus *Pachnephorus*, and this character coupled with the untoothed thorax make this species somewhat intermediate between the two genera. The posterior tibiae are not emarginate, however, and the distal joints of the antennae not so enlarged as usual in *Pachnephorus*, and the first abdominal segment not quite so long. It is one of the most atypical of the species of *Myochrous* and forms, with the three succeeding species, a little group of its own.

MYOCHROUS INTERMEDIUS, new species

PLATE 2, FIGURE 3

From 4 to 5 mm. in length, elongate oblong, black, somewhat shiny, covered with broad brown and white scales that are easily brushed off, in well-marked specimens these scales forming an interrupted pale lateral elytral vitta and a spot near the apex; prothorax without definite lateral toothing but angulate near the apex; elytral punctation not round, more triangular or star-shaped; anterior tibiae with very tiny inner tooth.

Head covered by scales down to antennal sockets, sometimes a faint median line, but no distinct occipital ridges, punctation beneath scales dense, fine and in lines; lower front shining, with a few fine scales and

rather coarse punctures. Antennae extending below humeri, distal joints thickened, deep reddish brown becoming darker. Prothorax almost as long as wide, rather convex in middle, depressed over the head, lateral margin without toothing but angulate near apex and often with a little angularity or undulation near base, a small apical and basal tooth; confluent punctate in lines, these forming a slight ridge on either side near the base. Elytra with small humeri and a short intrahumeral depression, the rows of punctures not very closely placed and becoming less dense and finer toward the apex, punctures not round but angular and between them finer, shallower punctures, the points of attachment of scales, the brown and white scales easily rubbed off, forming in well-marked specimens a lateral white interrupted vitta and spot near the apex. Body beneath shining with a bronzy luster and covered with fine white scales, first abdominal segment densely and finely punctate; tip of abdomen in male with a small pit, only a faint depression in female, a small undeveloped tooth on inner side of anterior tibiae. Hind femora not distinctly toothed. Length 4 to 5.4 mm.; width 1.9 to 2.6 mm.

*Type*.—A male, U.S.N.M. No. 59024, collected by McCrory, May 20, 1928.

*Type locality*.—Mount Pleasant, Iowa.

*Other localities*.—ILLINOIS; MISSOURI: Columbia; KANSAS: Cherokee County, Coffey County (R. H. Beamer; on rosinweed); Onaga (F. F. Crevecoeur); Topeka (Popenoe); INDIAN TERRITORY: Vinita (H. F. Wickham); TEXAS: No specific locality (Belfrage); College Station (W. D. Pierce), Columbus, Cypress Mill, Edna (J. D. Mitchell), Victoria (J. D. Mitchell), Lee County (Fall collection).

*Remarks*.—This species is intermediate between *M. squamosus*, the species with very wide scales, and *M. severini*, the species with very short, small scales. The aedeagi of *intermedius* and *severini* are almost indistinguishable in their outward appearance. The beetles are easily distinguished by the difference in vestiture and the less marked angularity on the sides of the thorax of *intermedius*. From *squamosus* it is to be distinguished by its narrower scales, and the fact that the punctures on the prothorax are not distinctly separated but are fine and in dense lines of confluent punctures.

MYOCHROUS SEVERINI, new species

PLATE 2, FIGURE 2

From 4.5 to 5.5 mm. in length, elongate oblong, rather dull black, with a faint bluish luster, with sparse, short, fine, white scales, prothorax feebly 2-toothed or 2-angled along margin and finely and confluent punctate in lines; elytral punctation not dense, and finer toward apex, striate punctures not round but somewhat triangular or

star-shaped, interspersed with finer punctures. Anterior tibiae with only a faint trace of tooth.

Head thinly covered with fine, closely, appressed white scales down to antennal sockets, a short vertical line in the middle of the front, punctation dense, moderately coarse, but surface not at all rugose, and little trace of the usual occipital ridging; lower front without scales, with a few coarse punctures. Antennae extending below humeri, brown with darker and thicker outer joints, of the usual proportions. Prothorax not quite as long as wide, convex, with a depression over the head and along the base at the sides; sides feebly 2-toothed with a little blunt tooth at apical and basal angles; disk with fine, confluent punctures in lines, sparsely covered with short, fine scales. Elytra with small humeri and a short intrahumeral sulcus, a faint basal callosity; the striate punctures not round but somewhat triangular, often star-shaped and interspersed with finer, shallower punctures, the larger punctures becoming finer and less dense toward apex; whitish scales short, fine, and not very dense. Body beneath shining, densely punctate, scales fine and hairlike, first abdominal segment finely and moderately densely punctate, a faint depression at tip of abdomen in the male, not so marked in the female. Hind femora not distinctly toothed, anterior tibiae with an inconspicuous tooth on inner side. Length 4.5 to 5.4 mm.; width 2 to 2.5 mm.

*Type*.—A male, U.S.N.M. No. 59025, collected June 22, 1935, by K. Cooper.

*Type locality*.—Sentinel Butte, N. Dak.

*Other localities*.—A female, collected at Lantry, S. Dak., June 28, 1947, by H. C. Severin.

*Remarks*.—Only two specimens, a male and female, are known. They are unique among North American species of *Myochrous* in being inconspicuously scaly, the scales very short and not dense. Otherwise the beetles resemble closely *M. intermedius*, which is covered with broad scales. The aedeagi of both are very similar in outward appearance.

#### MYOCHROUS PAUXILLUS Schaeffer

#### PLATE 2, FIGURE 5

*Myochrous pauxillus* SCHAFFER, Journ. New York Ent. Soc., vol. 41, p. 473, 1933.

About 4.5 mm. in length, oblong, black, shining with a bronzy luster, densely covered by broad pale scales easily rubbed off, thorax widest anteriorly with a distinct angularity, scarcely a toothing, visible below the middle; elytral punctures round and coarse.

Head covered by dense, appressed, white scales down to antennal sockets, the usual occipital ridges absent, a faint median line and fine longitudinal lines of confluent punctures radiating from this; lower front polished and with coarse punctures and a few finer hairlike

scales. Antennae extending below the humeri, dark reddish brown, third joint longer than fourth, distal joints thicker. Prothorax definitely wider than long with the widest part anteriorly an angularity, scarcely a toothing, on each side below the middle, and a small tooth at apical and basal angles; disk convex in the middle and a little depressed over the head; punctures confluent with fine longitudinal ridges, a similar sort of elevation on sides near the base as in *M. intermedius*; scales easily rubbed off. Elytra with sharp humeral prominences and an intrahumeral sulcus; rows of striate punctures coarse and round and closely placed in basal half, becoming finer and less dense toward apex; scales broad and appressed and concealing the punctation. Body beneath shining bronzy with fine white scales; legs reddish brown; no definite toothing on hind femora, front tibiae with a small tooth on inner side, not so much developed as in most species; first abdominal segment finely and rather densely punctate; abdomen of male alone depressed at the tip. Length 4.2 to 4.7 mm.; width 1.8 to 2.2 mm.

*Type*.—A male, from the Schaeffer collection, in possession of H. S. Barber, Washington, D. C.

*Type locality*.—Esperanza Ranch, Brownsville, Tex.

*Other localities*.—Los Borregos, Brownsville, collected by H. S. Barber, June 5, 1904.

*Remarks*.—This is the fourth of the *squamosus* group, which includes also *M. intermedius* and *M. severini*. They differ from most species by not having a 3-toothed thorax and by having very poorly developed toothing on the anterior tibiae. In this species the thorax is very broadly dilated anteriorly and more angular below the middle, and it also differs from the rest of the group by having round and not star-shaped or angular elytral punctures. Beetles of this species have been collected only about Brownsville, Tex.

#### MYOCHROUS RANELLA, new species

#### PLATE 2, FIGURE 5

From 3 to 5 mm. in length, broadly oblong, convex, shining black, sometimes with a bronzy luster beneath the rather broad brown and white scales. Prothorax almost as broad as the elytra, with a 3-toothed margin, convex and pinched in behind the eyes and depressed along the basal margin. Thoracic punctation fine, dense, and in longitudinal, confluent lines; rows of elytral punctures not so crowded as in *denticollis*.

Head with widely separated eyes, covered by scales down to the antennal sockets, beneath the scales the punctures dense and in lines; no trace of a median vertical depression, a ridge on each side running down over the occiput above the eyes; lower front shining under the

light scattered scales, these scales thinner than the ones on occiput; the punctures not so coarse as in *denticollis* or *movallus*. Antennae extending a little below the humeri, the five distal joints heavier and darker brown. Prothorax nearly as broad as elytra and considerably wider than long, with a 3-toothed margin and tooth at basal and apical angles; depressed along basal margin especially over the scutellum, convex otherwise, a flat area over the head and conspicuously pinched in behind the eyes; punctation rather deep and confluent and in longitudinal lines; scales dense, closely appressed and concealing punctation. Elytra about twice as long as the prothorax, broad, convex, with sharp little humeri and no basal callosity, the rows of punctures not so closely placed as in *denticollis*; scales rather broad and closely appressed. Body beneath shining under less dense scaliness, abdomen with finer scales, first segment moderately densely but not very coarsely punctate; a round depression at tip of female abdomen and a more triangular one on male. Legs short and heavy, a trace of a blunt tooth on hind femora and a sharp tooth on inner side of anterior tibiae. Length 3.2 to 5.5 mm.; width 1.8 to 2.7 mm.

*Type and paratypes*.—Type male and two female paratypes, U.S.N.M. No. 59026.

*Type locality*.—Jacksonville, Fla., collection of Ashmead.

*Other localities*.—FLORIDA: Archer, Brooksville (P. J. Darlington), Dunedin (W. S. Blatchley), Homestead (R. H. Beamer); GEORGIA: Baconton; SOUTH CAROLINA: Florence (R. H. Beamer); NORTH CAROLINA: Southern Pines; VIRGINIA: Virginia Beach (A. P. Morse); ALABAMA: Delchamps, Mobile (H. Soltau); MISSISSIPPI: Hancock County (H. Soltau); LOUISIANA: Covington (H. Soltau).

*Remarks*.—This is one of the most distinct of North American species of *Myochrous*. The broad heavy thorax, which is a third as long as the beetle, with its peculiar pinched-in depression behind the eyes, is very striking. The legs are short, the scales are coarser than in *denticollis*, and the elytral punctures are less dense.

#### MYOCHROUS MOVALLUS Johnson

#### PLATE 3, FIGURE 3

*Myochrous movallus* P. H. JOHNSON, Can. Ent., vol. 63, p. 148, 1931.

From 4 to 5 mm. in length, elongate oblong, dark reddish brown, densely covered with brown and white scales, often giving the beetles a speckled appearance; thorax nearly as long as wide, inconspicuously 3-toothed, decidedly convex and with a depression along the base and suggestion of a median depressed line; elytra also rather convex.

Head densely covered with brown and white, closely appressed scales forming a brown, irregularly star-shaped pattern on front, a median depression down front and a somewhat indistinct ridge on either side of the occiput extending down to above the eyes; surface

under the scales densely and moderately coarsely punctate; lower front less densely covered with scales, the scales being placed transversely. Antennae reddish with the distal joints darker, of the usual proportions. Prothorax almost as long as broad, with margin rather inconspicuously 3-toothed and a tooth at apical and basal angles; convex with a distinct depression along the basal margin most pronounced over the scutellum, and in some specimens a marked median line, this line varying in distinctness in individuals, also a tendency for a depression on either side behind the middle, in short the disk rather uneven; very densely covered with brown and white scales, the scales being curved and hiding the punctation beneath; punctures dense, confluent and not very coarse or deep, becoming coarser near the basal angle. Elytra wider than prothorax, smoothly convex with small humeri and a short intrahumeral sulcus; the rows of punctures densely placed, the punctures becoming finer and not so dense toward the apex; scales so dense as to hide the punctation almost entirely, and rather thick and curved. Body beneath deep reddish brown with the tip of the abdomen paler, shining, the abdomen not so densely covered by white appressed scales, the first segment as in *denticollis*, moderately densely punctate; the female with a faint round depression in the middle of the last segment, the male with a still fainter triangular depression located near the tip. Legs reddish, covered with scales, the anterior tibiae toothed on the inside, a very faint suggestion of toothing on the hind femora. Length 3.8 to 5.5 mm.; width 1.8 to 2.5 mm.

*Cotypes*.—Five cotypes, one in the Schaeffer collection in the National Museum, two in the collection of the South Dakota State College, Brookings, S. Dak., location of the rest unknown.

*Type locality*.—Elk Point, S. Dak.

*Other localities*.—KANSAS: Atchison County in collection of University of Kansas, collected by R. H. Beamer; MISSOURI: Atherton; IOWA: East Point.

*Remarks*.—This is an easily recognized species because of its narrow convex prothorax, which is almost as long as wide. It is also one of the deep reddish brown species. The densely crowded scales on the entire upper surface are unlike the sparse vestiture of *M. denticollis*. The scales are not flatly appressed but curved and present a rounded appearance when viewed with a microscope, and they are coarser than the scales of *denticollis*.

#### MYOCHROUS FLORIDANUS Schaeffer

#### PLATE 2, FIGURE 6

*Myochrous floridanus* SCHAEFFER, Journ. New York Ent. Soc., vol. 41, p. 472, 1933.

From 5 to 6 mm. in length, elongate oblong, deep reddish brown to piceous, usually the prothorax darker, somewhat shining beneath the dense, appressed, yellowish and brown scales; prothorax not quite

so long as broad, with a 3-toothed margin, smoothly convex with a depression along the basal margin, deeply, coarsely, rugosely, and confluent punctate.

Head with a thick covering of scales down to the antennal sockets and a more or less distinct median line, ending in a little ridge over the polished lower front, punctation coarse and tending to be in confluent lines; lower front not very densely or coarsely punctate with a fine scale arising from each puncture; an indistinct ridge on either side of occiput. Antennae reddish brown and not extending much below the humeri, with the distal joints thickened, of the usual proportions. Prothorax not quite so long as wide, smoothly convex with a 3-toothed margin and a tooth at each corner; depressed along the basal margin; punctation coarse, deep, and confluent. Elytra with no sign of basal callosities, depressed along the basal margin; the rows of elytral punctures closely placed; punctures coarse and deep, becoming finer toward apex; scales closely appressed, rather coarse and yellowish mixed with brown so as to give the elytra a speckled appearance. Body beneath shining, breast and abdomen dark brown, tip of abdomen reddish, scales on this white and more slender; first abdominal segment coarsely and densely punctate; a small rounded depression at tip of abdomen of female, a more triangular depression in male. Hind femora bluntly toothed, anterior tibiae with a sharp tooth on inner side. Length 4.7 to 6.5 mm; width 2.2 to 3.2 mm.

*Type and paratypes.*—In the United States National Museum, collected by G. P. Engelhardt.

*Type locality.*—St. Augustine, Fla.

*Other localities.*—FLORIDA: Capron, Childs, Enterprise, Ponce de Leon, Rock Bluff, Weirsdale, Winter Park; GEORGIA; SOUTH CAROLINA: Meredith, Myrtle Beach, Ridgeland; NORTH CAROLINA: Boardman (W. F. Fish, on *Toxodinium distichum*); VIRGINIA: Fredericksburg; ALABAMA: Mobile; MISSISSIPPI: Hancock; LOUISIANA: Pearl River.

*Remarks.*—Its reddish-brown coloring and yellowish scales differentiate this species from *denticollis* and *ranella*. The prothorax is more coarsely punctate than in *denticollis* and is also more convex. It looks like a small specimen of *M. magnus* but has a much more coarsely punctate prothorax and is a deeper reddish brown.

MYOCHROUS FLORIDANUS TEXANUS, new subspecies

PLATE 2, FIGURE 7

Two specimens in the Hubbard and Schwarz collection from Columbia, Tex., do not agree entirely with the other specimens of *M. floridanus*. They are a little smaller and have a more finely punctate prothorax, the punctures being more confluent and denser and

not so deep. The punctures on the elytra appear a little less spaced. The aedeagus seems to have a little less rounded tip with a slightly broader point. The aedeagus resembles somewhat that of *M. tibialis* Jacoby, from Mexico, which is another of the reddish-brown species, but which is larger and flatter with less dense punctation.

*Type and paratype*.—Type male and one paratype, U.S.N.M. No. 59023.

*Type locality*.—Columbia, Tex.

MYOCHROUS MAGNUS Schaeffer

PLATE 2, FIGURE 4

*Myochrous magnus* SCHAEFFER, Journ. New York Ent. Soc., vol. 12, p. 228, 1904.

From 6 to 8 mm. in length, elongate oblong, deep reddish brown, shining under the dense and closely appressed yellowish scales; prothorax almost as long as wide, 3-toothed, punctation not very coarse and not confluent, but dense; elytral punctation fine and well spaced.

Head with a depressed furrow from occiput down front, and a ridge on either side of occiput; thickly covered with scales only slightly less dense on the lower front; surface beneath scales obsoletely and rugosely punctate. Antennae yellowish or reddish brown, extending to below the humeri, of the usual proportions. Prothorax almost as long as wide, rather inconspicuously 3-toothed with a tooth also at apical and basal angles; smoothly convex with a slight depression along the basal margin and often a small median parting on anterior margin over the furrow on the head; disk densely and not coarsely or confluent punctate. Elytra with prominent humeri, with a basal callosity and sulcus within the humerus and transverse depression below the callosity, in some specimens two indistinct costae running down over the basal callosity on each elytron; punctation not visible through the dense and closely appressed scales, which are rather coarse and yellowish with a few slightly darker scales intermixed; the punctation beneath unusually fine and well spaced. Body beneath rather densely covered with finer scales, in dark specimens the abdomen dark with the tip usually reddish. Hind femora with a blunt tooth, anterior tibiae with the usual tooth on the inner side. Length 6 to 8 mm.; width 2.5 to 3.4 mm.

*Type*.—In the United States National Museum.

*Type locality*.—Esperanza Ranch, Brownsville, Tex.

*Other localities*.—MISSISSIPPI: Brookhaven (on elders); LOUISIANA: 10 miles up the river from New Orleans (on willows); TEXAS: Columbus. Also intercepted on fruit from Mexico.

*Remarks*.—This species, described from Brownsville, Tex., is the largest species of *Myochrous* in the United States. It is probably common in northern Mexico, as it has been intercepted in fruit from

there at ports of entry. The two specimens in the collection of the National Museum from north of New Orleans and at Brookhaven may have been introduced in shipments of fruit to New Orleans. It is one of the reddish-brown species and easily recognized because of its size and relatively fine punctation.

MYOCHROUS TIBIALIS Jacoby

PLATE 2, FIGURE 8

*Myochrous tibialis* JACOBY, *Biología Centrali-Americana*, Coleoptera, vol. 6, pt. 1, p. 175, 1882.

From 5 to 7 mm. in length, elongate oblong, deep reddish brown, densely covered by yellowish or pale brownish scales, prothorax 3-toothed, a little wider than long, moderately coarsely punctate, the punctures usually being well spaced and not at all contingent. Aedeagus short and with a hollowed-out, pointed tip.

Head densely covered by closely appressed scales to antennal sockets, surface beneath the scales densely and rugosely punctate, with a faint trace of median line and the usual ridge on either side of occiput; lower front shining and with less dense pubescence. Antennae reddish brown, of the usual proportions. Prothorax a little wider than long, smoothly convex without elevations or depressions except a slight median depression at base over the scutellum, with three small lateral teeth, also a tooth at apical and basal angles; punctures beneath the dense, closely appressed scales moderately coarse and dense but not at all confluent. Elytra with a small basal callosity and a transverse depression below it; rather densely covered by closely appressed scales, striate punctation beneath coarse and regular with some transverse ridging. Body beneath shining beneath the finer white scales, first abdominal segment sparsely and finely punctate. Hind femora very obscurely toothed, anterior tibiae with the usual inner tooth. Length 5 to 7 mm.; width 2.2 to 2.8 mm.

*Cotypes*.—In the United States National Museum, Museum of Comparative Zoology, and British Museum of Natural History (?).

*Type locality*.—In an endeavor to exclude other species that may be included in Jacoby's material, I hereby designate the type locality as Panzos, Vera Paz, Guatemala, Champion collector.

*Other localities*.—MEXICO: (Some undesignated localities, beetles in banana debris from Mexico), Santa Lucrecia, Tehuantepec; HONDURAS (in banana debris); GUATEMALA; NICARAGUA; PANAMA (all from banana debris). Specimens in Jacoby's *Biología* material from BRITISH HONDURAS: Belize, Río Hondo (Blancaneau); GUATEMALA: Cubilguitz, Lanquin (Champion). A specimen sent by the British Museum as Jacoby's *melancholicus* (synonymized with *carinatus* by Bryant) from Frontera, Tabasco, Mexico, Höge collector.

*Remarks.*—This is one of the reddish-brown species with pale yellowish or brownish scales. It resembles *M. magnus* Schaeffer but is a more coarsely punctate species with a shorter aedeagus, which, however, is very similar to that of *magnus* in the shape of its tip. Most of the specimens in the National Museum collection are without exact locality labels, having been taken at ports of entry in shipments of bananas. It would appear that the species ranges from Mexico to Panama.

## MYOCHROUS LONGULUS LeConte

## PLATE 3, FIGURE 5

*Myochrous longulus* LeConte, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 86.

From 4.5 to 5.5 mm. in length, narrowly oblong, shining black with a bronzy or coppery luster, legs and antennae reddish, covered with long, coarse, flatly appressed, brown and white scales which are easily rubbed off; prothorax fully as long as wide and 3-toothed; elytral punctures becoming much finer and less dense from the middle to the apex; anterior tibiae inconspicuously toothed.

Head rounded and covered by scales down to the antennal sockets, no evidence of occipital ridges or of a median depression, surface finely and rather densely punctate, not at all rugose; lower front shining, with small scattered punctures and a few finer scales. Antennae extending below humeri, third joint longer than fourth, reddish brown, distal joints thicker. Prothorax fully as long as broad with three lateral teeth, smoothly convex, without humps or depressions; punctuation dense, moderately coarse and not confluent, without ridgings, usually hidden by the flat, coarse, brown and white scales. Elytra a little wider than thorax with small humeri and short intra-humeral sulcus; rows of punctures not contingent, punctures becoming much finer and less dense from the middle to the apex; scales broad and flatly appressed and forming an irregular brown and white color pattern. Body beneath dark, shining with a bronzy luster, thickly covered by scales, a little less coarse than on upper surface; first abdominal segment densely and finely punctate; the male with a little depression at the tip of abdomen, in female this depression less marked. Hind femora without toothing, anterior tibiae with an inconspicuous tooth on the inside. Length 4.4 to 5.7 mm.; width 1.9 to 2.5 mm.

*Type.*—In LeConte collection, Museum of Comparative Zoology.

*Type locality.*—Yuma, Ariz.

*Other localities.*—ARIZONA: Dome, Ehrenberg, Gila Bend (in alfalfa), Somerton (in cottonfield), Stafford, Tempe; CALIFORNIA: Blythe, Brawley, El Centro (on *Pluchea sericea*, injuring cotton, and on alfalfa); Holtville, Los Angeles County, Mexicale, Needles, Pot-holes, San Diego County, east shore of Salton Sea, ex plane San

Pedro, Winterhaven (on *Melilotus indica*); COLORADO: Grand Junction; IDAHO: Blackfoot (on sugar beets); BAJA CALIFORNIA: Calexico.

*Remarks.*—This slender, elongate species with long, coarse scales is not easily confused with any other. Apparently it has an unusually long range, occurring from Arizona to Idaho, and west to California and Lower California. E. A. McGregor<sup>15</sup> reports that beetles have done severe injury to cotton in Yuma, Ariz.; 500 acres had to be replanted twice following complete destruction of seedling plants, and finally planting was abandoned. Adults were seen feeding on the subterranean stems of arrowweed (*Pluchea sericea*), trailing mallow, and *Baccharis* sp., this being the first time the field was sown to crops. Previously almost a pure stand of arrowweed had been there.

MYOCHROUS WHITEI, new species

PLATE 3, FIGURE 4

From 3.5 to 5 mm. in length, elongated oblong, black, shining with a bronzy luster under the dense, broad, pale brown and white scales, scales easily rubbed off; prothorax as long as wide, inconspicuously 3-toothed, elytra with rows of rather small punctures, not very closely placed and finer toward apex.

Head rounded over the occiput, with a depressed median line half-way down the front, occipital ridgings not present, punctures beneath the scales, which cover the head down to antennal sockets, fine and dense and in lines on the occiput; lower front shining, with fewer and finer scales and sparse punctation. Antennae extending below the humeri, reddish brown with darker and thicker distal joints, of the usual proportions. Prothorax fully as long as wide, rather inconspicuously 3-toothed, with a small tooth at apical and basal angles; evenly convex, without humps or depressions; surface densely, finely, and not confluent punctate, the punctures somewhat elongate with a tendency toward arrangement in lines and thickest in the middle, entirely covered by the closely appressed, wide, brown-and-white scales. Elytra with small humeri and short intrahumeral sulcus; no distinct basal callosities; punctures not very coarse and becoming finer and sparser in apical half; scales dense, flatly appressed and wide, usually pale but frequently presenting a pale brownish vittation, with the apex usually brown. Body beneath black, shining with a metallic luster; legs and abdomen less densely covered by finer pale scales, abdomen finely punctate; a small depression at tip of abdomen in the male, less marked in the female. Hind femora not toothed, anterior tibiae very indistinctly toothed. Length 3.6 to 5.1 mm.; width 1.6 to 2.3 mm.

*Type and paratypes.*—Type male and 12 paratypes, collected March 19, 1931, by E. P. Van Duzee, California Academy of Sciences; 2 paratypes, U.S.N.M. No. 59022.

<sup>15</sup> Journ. Econ. Ent., vol. 10, p. 504, 1917.

*Type locality*.—Coalinga, Fresno County, Calif., Boy Scout Camp.

*Other localities*.—Los Banos, Calif. (E. P. Van Duzee, May 23, 1918); 2 miles east of Cressey, Merced County, Calif. (B. E. White, Sept. 13–18, 1940).

*Remarks*.—Although closely related to *M. longulus* LeConte, this species seems quite distinct. It is smaller and a little more convex, with shorter elytra and paler scales. The aedeagus is less acutely tipped than that of *M. longulus*. So far it has been collected only in the San Joaquin Valley of California, which is farther north than *longulus* has been found. Burdette E. White, for whom it is named, had collected the beetles in numbers and set them aside to describe as new. He writes that he found them “on the outer fringe of a sandy marsh consisting of two or three species of reeds and a ‘salt grass,’ probably Bermuda grass, from which most of the specimens were swept. This marsh is green nearly the year around, as the water source is from an artesian flow, adjacent to the Merced River.”

MYOCHROUS FEMORALIS Jacoby

PLATE 3, FIGURE 8

*Myochrous femoralis* JACOBY, *Biologia Centrali-Americana*, Coleoptera, vol. 6, pt. 1, p. 175, 1882.

From 5 to 7 mm. in length, oblong, dark piceous, shining with a bronzy luster through the grayish and brown scales, prothorax broad, 3-toothed, densely but not confluent punctured with round deep punctures.

Head covered with brown and gray scales down to the antennal sockets, no distinct median line, the punctures tending to be in lines, and the surface beneath the scales rough, a ridge on each side of occiput. Antennae reddish brown, of the usual proportions. Prothorax somewhat wider than long, smoothly convex with a slight median basal depression over the scutellum; the three lateral teeth well developed, and the usual apical and basal teeth; surface densely but not confluent or rugosely punctate, the punctures being round, deep, and not very coarse. Elytra without marked depressions, smoothly convex, covered by dense gray and brown scales, not entirely concealing the punctation below, the scales somewhat curved and not too closely appressed. Striate punctures regular, without ridging. Body beneath covered lightly with fine white scales, punctures on first abdominal segment coarse and moderately dense. Hind femora distinctly toothed, anterior tibiae with the usual tooth. Length 5.2 to 7 mm.; width 2.5 to 3 mm.

*Type*.—A single specimen in the British Museum, collected by Blancaneaux.

*Type locality*.—British Honduras, River Sarstoon.

*Other localities*.—NICARAGUA, Escondido River, 50 miles from Blue-

fields, collected by C. W. Richmond; HONDURAS: "Honduras or Panama"; GUATEMALA; MEXICO, Córdoba (Knab). (Most of the specimens are from banana trash in shipments of fruit without exact localities.)

*Remarks.*—One of the specimens presented to the United States National Museum from the original *Biologia* material under the name *Myochrous tibialis* Jacoby bears the same locality label, British Honduras, River Sarstoon (Blancaneaux), as is given by Jacoby for the single type specimen of *M. femoralis*. It is not the same species as the others in the *Biologia* material of *tibialis* and appears to fit very well Jacoby's description of *femoralis*. Dr. P. J. Darlington has compared my drawing of this specimen with the type of *femoralis* in the British Museum and states that the type of *femoralis*, like my drawing, is wider than *tibialis* and has toothed hind femora, and the punctuation of the pronotum and elytra also correspond; also that the pubescence of *femoralis* does seem grayer and less yellowish than *tibialis*. He concludes that I am probably right in referring this specimen to *femoralis*.

Jacoby himself stated that it differed from *tibialis* in having subdentate posterior femora and being without the transverse ridging of the elytra. If my interpretation is correct, this species appears to be abundant throughout Nicaragua, Guatemala, and Honduras. Specimens have been brought in with shipments of bananas from these countries. It is a broadly oblong beetle with a wide prothorax that is densely and deeply but not at all rugosely punctate.

MYOCHROUS COENUS, new species

PLATE 3, FIGURE 6

From 5 to 6 mm. in length, oblong, dark piceous, shining with a bronzy luster from beneath the moderately dense, yellowish and brownish scales, the scales not concealing the sculpture beneath; prothorax wider than long, 3-toothed, densely and coarsely punctate, elytra without definite transverse ridgings or callosities.

Head covered by scales to the antennal sockets, beneath the scales coarsely and rugosely punctate, a faint median line in some specimens, and the usual occipital ridge on each side of head. Antennae reddish brown with deeper colored outer joints, of the usual proportions. Prothorax wider than long with three well-developed teeth and a tooth at apical and basal angles; disk not very convex, rather flat, with a depression along basal margin; punctuation dense, coarse, and deep but not confluent, a slight tendency toward ridging in basal part where the punctures usually become denser. Elytra without distinct callosities or depressions, regularly striate punctate without any transverse ridging; scales not so dense and closely appressed as to hide the punctuation. Body beneath shining under the light, fine, white pubescence,

first abdominal segment coarsely and rather densely punctate. Anterior tibiae with the usual tooth and hind femora bluntly toothed. Length 5 to 6.2 mm.; width 2.4 to 2.8 mm.

*Type and paratypes.*—Type male and three paratypes, collected by A. H. Jennings in April 1911, U.S.N.M. No. 59013; one paratype in Museum of Comparative Zoology.

*Type locality.*—Gatun, Canal Zone, Panama.

*Other localities.*—Miraflores, Canal Zone, December 28, 1925, collected by White and Clayton; Old Panama, January 1911, A. Busck.

*Remarks.*—This is not a very distinctive species and can best be recognized by the genitalia. Superficially the beetles are much like *M. platylonchus* with which they commonly occur in the Canal Zone. The shape of the aedeagus, however, is very different, resembling that of *M. femoralis* Jacoby but smaller. The thoracic punctation is not so dense or regular as in that species and the beetles are a little smaller, but the two species are closely related.

#### MYOCHROUS BARBADENSIS Blake

##### PLATE 3, FIGURE 7

*Myochrous barbadensis* BLAKE, Proc. Ent. Soc. Washington, vol. 49, p. 27, 1947.

From 5 to 6.5 mm. in length, elongate oblong, deep reddish brown to piceous black, shining with a bronzy luster beneath the yellowish, not closely appressed scales; thorax 3-toothed, coarsely but not very densely punctate; elytral scales not so dense as entirely to conceal punctation beneath. Tip of aedeagus with an unusually broad point.

Head covered by yellowish scales down to antennal sockets, lower front with finer, sparser, white hairlike scales; a median depressed line down occiput and dense deep punctures over upper head making the surface rugose; the usual occipital ridges on each side. Antennae reddish or yellowish brown, of the usual proportions. Prothorax a little wider than long, with three well-developed lateral teeth and the usual one at apical and basal angle, moderately convex, with a depression along the basal margin most pronounced over the scutellum; surface coarsely and deeply but not densely punctate, with the scars of scales forming shallow punctures between. Elytra not so densely scaly as to hide the luster and punctation beneath; punctures very coarse and closely placed, with a tendency to transverse ridging in depression below the basal callosities. Body beneath very shining, with sparse, short, white hairlike scales, first abdominal segment not very coarsely or densely punctate. Tip of last segment of male with a triangular, of female with a rounded, pit. Hind femora bluntly toothed, anterior tibiae with the usual inner tooth. Length 5 to 6.5 mm.; width 2.3 to 2.8 mm.

*Type and paratype.*—Type male and one paratype female, U.S.N.M. No. 57998, collected March 14, 1936, by R. E. Blackwelder.

*Type locality*.—Barbados, British West Indies.

*Other localities*.—GRENADA, B. W. I.: St. Augustine; TRINIDAD (P. J. Darlington, April 1929); BRITISH GUIANA: Botanic Garden, Georgetown (Harold Morrison, May 1–26, 1918); DUTCH GUIANA: Rust en Werk, Surinam (eating young leaves of bananas; D. C. Geijskes, January 30, 1931).

*Remarks*.—The aedeagus of this species bears a close resemblance to those of *M. femoralis* Jacoby and *M. coenus* but has the broadest tip of any of them. All three species are very similar in outward appearance, but this one is usually less densely punctate on the prothorax. Originally described from Barbados, it has been collected on both Grenada and Trinidad as well as on the mainland, in the Guianas.

MYOCHIROUS LATISETIGER, new species

PLATE 3, FIGURE 2

From 5 to 6 mm. in length, oblong, piceous with a bronzy luster beneath the dense, curved, dark brown and white scales, the scales unusually broad and not flatly appressed; head, thorax, and elytra coarsely and densely punctate; prothorax broad, smoothly convex, and with three well-developed teeth.

Head coarsely, rugosely, and densely punctate beneath the scales, with a faint median line, the ridge on either side of occiput present. Antennae reddish brown, of the usual proportions. Prothorax broader than long, with three strong lateral teeth and one at apical and basal angles; a depressed line across base, disk moderately convex; punctation dense, deep, round, and becoming rugose toward base. Elytra with a small humeral prominence and short intrahumeral sulcus, and below this a transverse depression on the sides; striate punctation unusually coarse and contiguous, transversely ridged in basal half; scales on entire upper surface wider than in most species and not appressed but curved. Body beneath shining beneath the much finer pale pubescence; first abdominal segment coarsely punctate. Hind femora with an indistinct tooth, anterior tibiae with the usual inner tooth. Length 5.2 to 6.2 mm.; width 2.5 to 2.8 mm.

*Type and paratype*.—Type male and one paratype, U.S.N.M. No. 59028, collected by F. L. Gallege in 1941, injuring the fruit of *Bixa orellana* Linnaeus.

*Type locality*.—Atlantico, Colombia.

*Other localities*.—Aracataca, Magdalena Province, Colombia (P. J. Darlington, 1929).

*Remarks*.—This is another species of the *femoralis* group in which the aedeagus, although with a similarly shaped tip, is shorter. Like the rest of the group, it is a coarsely punctate beetle but differs from them in having wider scales that are mostly dark brown with some paler ones intermingling.

## MYOCHROUS PLATYLONCHUS, new species

## PLATE 1, FIGURE 6

From 5 to 6 mm. in length, oblong, deep reddish brown to piceous, very shiny through the curved, not closely appressed yellowish scales, the scales not so dense as to conceal the sculpture, coarsely and densely punctate throughout; aedeagus with a scooplike tip, unusually broad.

Head covered with scales down to antennal sockets, an unusually deep median furrow down front ending in a broad shallow depression; surface under the scales coarsely and rugosely punctate, a ridge on either side of occiput. Antennae extending a little below the humeri, reddish brown, of the usual proportions. Prothorax considerably wider than long and somewhat contracted at the base, rather flat and with little convexity, a slight median depression over the scutellum; the three lateral teeth well developed; punctuation very dense, coarse, and becoming coarser and more confluent in the basal half with ridgings. Elytra smoothly convex without callosities and only a faint transverse depression on the side; striate punctures coarse and contingent with transverse ridgings visible through the moderate scaliness; elytra usually a little more reddish brown than the prothorax. Body beneath shining under the light fine scales, unusually coarsely punctate over the metasternum and first abdominal segment. Hind femora with a small tooth, anterior tibiae with the usual inner tooth. Length 4.8 to 6 mm.; width 2.2 to 2.7 mm.

*Type and paratypes.*—Type male and 24 paratypes, U.S.N.M. No. 59020, collected January to April 1911 (E. A. Schwarz, A. Busck, A. H. Jennings); 2 paratypes in Museum of Comparative Zoology.

*Type locality.*—Paraiso, Canal Zone, Panama.

*Other localities.*—CANAL ZONE: Las Cruces (E. A. Schwarz and A. Busck); Bohio (E. A. Schwarz); Corazal (A. Busck); Tabernella (A. Busck); Gatún (M. Hebard); PANAMA: Trinidad River, Colorado Island (J. D. Hood and N. S. Scrimshaw); Old Panama (A. H. Jennings); Panama (A. H. Jennings); COLOMBIA: Aracataca, Magdalena Province (P. J. Darlington, 1929); Buenaventura (C. L. Fagen).

*Remarks.*—This species has been collected in numbers throughout the Canal Zone. A number of specimens have been taken also by P. J. Darlington in northern Colombia and one by C. L. Fagen well down the coast of western Colombia. It is a shiny, deep reddish-brown or bronzy beetle with a very coarsely punctate prothorax and a most distinctive aedeagus, the tip of which is wider than usual in the genus and scoop-shaped.

## MYOCHROUS GEMINUS, new species

## PLATE 1, FIGURE 8

About 5 mm. in length, oblong, piceous, shining with a bronzy luster from beneath the curving grayish white scales; prothorax 3-

toothed, very densely and toward the base coarsely and rugosely punctate; aedeagus similar to that of *M. platylonchus* in having a broadly hollowed-out apex.

Head covered with scales down to antennal sockets, beneath these the punctures coarse and tending to be rugosely striate; a median line ending in a shallow depression between the eyes, the usual pair of occipital ridges. Antennae reddish brown and of the usual proportions. Prothorax wider than long, not very convex, with a basal depression along margin, the three lateral teeth well developed, and a tooth at apical and basal angles; punctation dense, tending to be in short lines, and becoming coarser and rugose toward the base. Elytra with a short intrahumeral sulcus and slight transverse lateral depression below the sulcus; striate punctures very close and coarse and in basal part in the depression with transverse ridging; surface lustrous beneath the curved, not dense, grayish-white scales. Body beneath shining, with fine pale pubescence, first abdominal segment coarsely and densely punctate. Hind femora with a tiny tooth, anterior tibiae toothed. Length 4.8 to 5.5 mm.; width 2.2 to 2.5 mm.

*Type and paratypes*.—Type male and one paratype, U. S. N. M. No. 59021, "in banana debris from Ecuador," April 13, 1947; one paratype in Museum of Comparative Zoology.

*Type locality*.—"Taken from banana debris from Ecuador" at New Orleans, La.

*Other locality*.—PERU: Piura.

*Remarks*.—Although quite distinct from *M. platylonchus*, this species belongs to the same group. It is about the same size, a little darker in color, with grayish instead of yellow scales. It has the same dense rugose punctation, the shape of the prothorax is similar, and the aedeagus is strikingly like that of *platylonchus* in shape, both when viewed from the side and in the broadly scooped-out tip, although the tip is a little narrower. The pubescence is thicker and paler in *geminus*. Two specimens from Piura, Peru, collected by P. A. Berry in cotton buds, October 15, 1941, are apparently the same.

MYOCHROUS ELACHIUS, new species

PLATE 4, FIGURE 3

From 4.5 to 5 mm. in length, oblong, shining bronze beneath the closely appressed, mottled pale and dark brown scales; prothorax 3-toothed, a little wider than long, not very coarsely but densely punctate; aedeagus pale with a dark furrow running down the tip.

Head covered with scales down to antennal bases, beneath the scales the punctation not dense or rugose, the usual occipital ridge on each side, and in some specimens a faint median line. Antennae reddish brown, of the usual proportions. Prothorax a little wider than long with three lateral teeth and a tooth at basal and apical angles, moderately convex with a depressed line along the basal margin; puncta-

tion under the dense scaliness not very coarse and well spaced but dense. Elytra with a short intrahumeral sulcus and basal callosity on each side of scutellum, and a slight depression on the outer side of elytra below the humerus; striate punctation regular, without transverse ridgings; pubescence dense, nearly concealing the bronzy surface beneath, and presenting a mottled brown and white appearance. Body beneath shining bronze with a fine pale pubescence, punctures on first abdominal segment moderately dense and fine; an indistinct blunt tooth on posterior femora, anterior tibiae with the usual tooth on inner side. Length 4.4 to 5.2 mm.; width 2 to 2.3 mm.

*Type and paratypes.*—Type male and three paratypes, U.S.N.M. No. 59014, collected by E. A. Schwarz and A. H. Jennings; one paratype in Museum of Comparative Zoology.

*Type locality.*—Ancon, Canal Zone, Panama.

*Other localities.*—CANAL ZONE: Gatún and Paraíso (A. H. Jennings); PANAMA: No specific locality (E. A. Schwarz); Tabernilla (A. Busck); found in banana debris in shipments from Honduras, Nicaragua, Guatemala, and Mexico. One specimen collected by H. Dybas at Puerto Berrio, Colombia, cannot be distinguished from the specimens from Central America.

*Remarks.*—Its small size and mottled appearance, a result of the intermingling of pale and dark brown scales, readily distinguish this little beetle from the larger ones having more uniform clothing. The aedeagus is peculiar in being pale yellowish with a dark streak down the furrow at the tip.

MYOCHROUS PAULUS, new species

PLATE 4, FIGURE 4

From 4 to 5.5 mm. in length, oblong, shining bronze beneath the closely appressed mottled brown and white scales; prothorax 3-toothed, densely and finely punctate, the punctures frequently becoming coarser and a little ridged in the middle of the base.

Head covered with brown and white scales down to the base of the antennae, beneath these a median depressed line and a distinctly punctate, rugose surface, with the usual occipital ridge on each side. Antennae reddish brown, of the usual proportions. Prothorax large, nearly as wide as elytra, broader than long, with three lateral teeth and the usual apical and basal tooth; disk evenly convex, depressed along base, surface finely and moderately densely punctate, the punctures becoming coarser at base and somewhat ridged in some specimens near the middle of the base. Elytra not so densely covered by the brown and white scales as to conceal the bronzy luster and striate punctures below; in basal half, especially in the transverse depression below the basal callosity, the surface ridged. Body beneath shining beneath the light pale pubescence, punctures on first abdominal

segment fine and not very dense. A distinct tooth on posterior femora and the usual tooth on anterior tibiae. Length 4.2 to 5.6 mm.; width 2.2 to 2.6 mm.

*Type and paratypes*.—Type male and 26 paratypes, U.S.N.M. No. 59015, collected in September and October 1918 by Harold Morrison; two paratypes in the Museum of Comparative Zoology.

*Type locality*.—Botanic Garden and along seashore 4 miles east of Georgetown, British Guiana.

*Other localities*.—BRITISH GUIANA: Bartica, Demerara (R. J. Crew); DUTCH GUIANA: Rusten Werk, Surinam (on bananas; D. C. Geyskes); FRENCH GUIANA: Maroni, Cayenne (F. Pillault); VENEZUELA: "L. Laglaize," Tucupita, Delta Amacuro Territory (on *Xanthosoma sagittifolium*; L. A. Salas); BRAZIL: Amazon River near Parintins (Sept. 12 to 21, 1930; Holt, Blake, and Agostini); Amazon River near Santarém, Santa Catharina (Bowditch collection); Baturité Mountains, Ceará (W. M. Mann); Natal, Pará (W. M. Mann).

*Remarks*.—This species is closely related to the Central American species *M. elachus* and differs from it chiefly by being a little wider and more finely punctate and in having the aedeagus not hollowed out at the tip, as in *M. elachus*.

#### MYOCHROUS NANUS, new species

#### PLATE 4, FIGURE 5

About 4.5 mm. in length, oblong, shining bronze beneath the mottled brown and white scales; prothorax 3-toothed, finely and sometimes densely punctate, elytra with the striate punctures becoming much finer and more distantly placed in apical half of elytra.

Head covered by scales to the antennal bases, punctation somewhat variable, in some specimens the surface rugose, in others less densely punctate, with a trace of a median line and the usual ridge on each side of the occiput. Antennae reddish brown, of the usual proportions. Prothorax wider than long, with three lateral teeth and a tooth at apical and basal angles; disk evenly convex with a depressed line marked by a row of punctures along the basal margin; punctation rather sparse and fine, in some specimens much denser than in others. Elytra with a well-marked depression below the basal callosity; striate punctures in basal half moderately coarse but not dense and becoming much finer in apical half; a tendency to transverse ridging in the depression below the callosities. Body beneath shining bronze with sparse pale pubescence; punctation of first abdominal joint fine and not dense. Posterior femora with a tiny tooth, anterior tibiae with the usual tooth. Length 4.1 to 4.7 mm.; width 2 to 2.3 mm.

*Type and paratypes*.—Type male and two paratypes, Museum of Comparative Zoology type No. 28121, collected by Germain. One paratype, U.S.N.M. No. 59016.

*Type locality*.—Cochabamba, Bolivia.

*Other localities*.—BOLIVIA: Rurrenabaque, Beni River (W. M. Mann, Mulford Biological Expedition, 1921-22); PARAGUAY: San Salvador (Dr. Bohls).

*Remarks*.—The sparser elytral punctation beneath the mottled brown and white scales distinguishes this from the two preceding species. The aedeagus also has a differently shaped broader tip. These three little species present a very similar appearance and are undoubtedly closely related. The most northern one has been collected from Mexico to Colombia, the second one ranges from the Guianas down to the Amazon, and the third has been taken in Bolivia and Paraguay. Their chief differences are in punctation and the shape of the aedeagus.

MYOCHROUS RHABDOTUS, new species

PLATE 4, FIGURE 2

About 6.5 to 7 mm. in length, elongate oblong, shining bronzy black beneath the wide, pale brown scales, prothorax not very convex, sparsely punctate, with three well-developed lateral teeth, elytra with faint vittate markings either as the result of slight costae beneath or faintly deeper brown scale coloration.

Head covered with scales down to antennal sockets, the usual ridges on each side of occiput and a median line half down the front; punctation moderately dense and coarse, not rugose. Antennae of the usual proportions, deep reddish brown. Prothorax almost as long as wide, not very convex, depressed along the base, lateral sides with three large teeth as well as an apical and basal tooth; punctation fine and not dense in anterior portion, becoming denser and coarser toward base; scales about as broad as long, closely appressed, pale brownish. Elytra without distinct basal callosity, punctures coarse but well spaced, even in basal half, and becoming finer and more distant toward apex; three faint longitudinal costae and the scales covering them appearing slightly deeper brown, giving the elytra a faintly vittate appearance. Body beneath shining with bronzy luster, much less covered by scales, the scales finer and more hairlike. Hind femora bluntly toothed, anterior tibiae with the usual inner tooth. Length 6.5 to 6.9 mm.; width 2.6 to 3 mm.

*Type and paratypes*.—Type male and two paratypes, Museum of Comparative Zoology type No. 28122, collected by P. J. Darlington in April 1929; one paratype, U.S.N.M. No. 59018.

*Type locality*.—St. Augustine, Trinidad.

*Other localities*.—BRAZIL: Santa Catharina (Bowditch collection); TRINIDAD: "Trinidad," on sugarcane; D'Abadie; Golconda estate, San Fernando; Aripo savanna, all collected in October 1918 by H. Morrison.

*Remarks.*—This species is characterized by the faintly vittate elytra and the unusually broad and heavy aedeagus. The scales are about as long as broad.

MYOCHROUS DARLINGTONI, new species

PLATE 8, FIGURE 3

From 6 to 7 mm. in length, elongate oblong, piceous beneath the broad brown-and-white scales, with deep reddish-brown antennae and legs, the scales forming a brown-and-white pattern on the thorax and elytra, with the sides of the thorax and median line pale, a pale, incurving band from the humerus down the elytron and a pale transverse apical band, neither reaching the suture; thorax 3-toothed, approximately as long as wide and more convex anteriorly.

Head densely covered by wide scales even down to the base of the jaws, the usual ridges on either side of occiput, surface beneath the scales densely and deeply but not rugosely or confluent punctate. Antennae reddish brown, of the usual proportions. Prothorax as long as wide, strongly convex in anterior half and smoothly rounded over the middle, with a thickened anterior margin over occiput having a faint median notch, and a depression behind, also depressed along the basal margin; sides with three tiny teeth and a tooth at basal and apical angles; punctation deep but not very dense and moderately coarse, completely hidden by the broad brown and white scales; these scales forming a pattern in which the median line and sides are white, some of the scales deeper chocolate brown. Elytra with a similar sort of pattern, consisting of a long incurving pale band from humerus down toward suture and another forming a transverse pale band not reaching the suture near the apex; sides more or less pale and the brown areas interspersed with deeper brown scales; striate punctation below entirely concealed by scales, but consisting of not coarse or contingent punctures becoming much finer toward the apex. Body beneath densely covered by broad white scales leaving little of the dark shining surface beneath visible. Hind femora not distinctly toothed, anterior tibiae with the usual inner tooth. Length 6 to 7 mm.; width 2.5 to 3 mm.

*Type and paratypes.*—Type male and three paratypes, Museum of Comparative Zoology type No. 28123, collected by P. J. Darlington in 1929; one paratype, U.S.N.M. No. 59019.

*Type locality.*—Aracataca, Magdalena Province, Colombia, collected by P. J. Darlington, in 1929.

*Other locality.*—COLOMBIA: New Granada.

*Remarks.*—Recognized by the narrow shape and unusual color pattern formed by the broad brown and white scales. The thickened anterior margin of prothorax is similar to that found in *M. bolivianus* and the *curculionoides* group. The shape of the aedeagus is rather unusual.

## MYOCHROUS BOLIVIANUS, new species

## PLATE 4, FIGURE 6

From 5.5 to 6.5 mm. long, broadly oblong, deep reddish brown, prothorax nearly half as long as elytra, with three tiny lateral teeth, and a thickened anterior edge covering occiput, densely covered with short, broad, pale brown and white scales forming a pattern with two to four white spots on elytra; punctation beneath scales fine, not dense.

Head somewhat receding, the occiput bulging and with the usual occipital ridges on either side, and in some specimens a well-marked median line down front ending in a depression, often almost a pit, in the middle of the front; labrum unusually small; head covered with dense, closely appressed scales down to antennal bases, beneath the scales the punctation rather fine and moderately dense. Antennae reddish brown, of the usual proportions. Prothorax large, almost as wide as elytra, and a little wider than long, convex, with a peculiar thickening along the anterior margin over the head, almost concealing the occiput from above, and a depression behind this; the lateral edge with three small teeth and a small apical and basal tooth; surface shining reddish brown or piceous with moderately fine, well-spaced punctures; a row along basal margin forming a depressed line; scales very dense, often forming a pattern with a white median line extending halfway down thorax and a broad white area on each side, this pattern, however, variable. Elytra rather convex, especially in the middle, with sharp humeral prominences and intrahumeral depression extending down below a slight basal callosity; surface very shining, deep reddish brown or piceous with rather small striate punctures becoming fine toward the apex. Scales forming a pattern in some specimens, having on each elytron a white spot before and after the middle and smaller lateral spots, these, however, variable. Body beneath fairly densely covered with somewhat thinner scales, covering the punctation; unusually long hairs between the anterior coxae. A blunt tooth on posterior femora, and a tooth also on inner side of anterior tibiae. Length 5.5 to 6.5 mm.; width 2.6 to 3 mm.

*Type and paratypes*.—Type male and seven paratypes, U.S.N.M. No. 59017, collected October 23 to November 9, 1921, by W. M. Mann, Mulford Biological Expedition.

*Type locality*.—Rosario, Lake Rogagua, Bolivia.

*Other localities*.—San Gregorio, Bolivia (W. M. Mann, October 1921).

*Remarks*.—This is an unusually distinctive species, characterized by its short, chunky shape and the markings of the scales. The thickened anterior margin of the prothorax is similar to that in the *curculionoides* group. It differs from these species in having a much broader prothorax which is nearly as wide as the elytra. Dr. Mann states that he collected it on the border of the lake.

## MYOCHROUS CHACOENSIS, new species

## PLATE 4, FIGURE 7

Approximately 7 mm. in length, broadly oblong oval, shining black, covered by pale white and brown scales forming on the elytra a semivittate pattern; thorax almost as long as broad, projecting over head with a thickened anterior margin; strongly convex with a 3-toothed lateral margin; surface rather finely and not very densely punctate; elytra with well-spaced punctation.

Head somewhat receding with a median vertical groove down front and a well-developed ridge on either side of occiput; the punctation covered by dense, closely appressed scales. Antennae pale, of the usual proportions. Prothorax almost as long as broad with the anterior margin thickened and also concealing the head, with a slight median impression over the occiput; strongly convex, depressed along the basal margin; sides 3-toothed; surface finely and not very densely punctate. Elytra twice as long as thorax, strongly convex with prominent humeri and at base two short costae, otherwise depressed along the basal margin; a slight transverse depression below the humeri; striate punctation not very coarse or dense and covered by the broad, closely appressed pale brown and white scales, the scales forming indistinct brown and white vittae. Body beneath shining black with fine white scales, the abdomen without scales down the middle, first segment finely and not very densely punctate. Tibiae reddish brown, anterior ones with a distinct tooth on inner side and another at apex. Length 6.9 mm.; width 3.3 mm.

*Type*.—A female in Miguel Lillo Institute, Tucumán, Argentina, collected by F. Monrós.

*Type locality*.—Resistencia, Chaco Province, Argentina.

*Remarks*.—As in the case of *M. stenomorphus* and *M. monrosi*, as well as of *M. spinipes* and *M. mamorensis*, this species, although separated by a thousand miles, has a close relative, *M. bolivianus*. In all three the closely related species resemble each other strongly but have minor differences. In this case, *M. chacoensis* is a bit larger and darker, with paler scales having a different color pattern on the lower surface as well as above.

## MYOCHROUS CURCULIONOIDES Lefèvre

## PLATE 5, FIGURE 5

*Myochrous curculionoides* LEFÈVRE, Ann. Soc. Ent. France, ser. 6, vol. 9, p. 21, 1899.—JACOBY, Entomologist, vol. 30, p. 263, 1897.

About 6 mm. in length, thorax much narrower than elytra, which are broadly oblong; deep reddish brown to piceous black, covered with broad yellowish scales, surface beneath coarsely and densely punctate, thorax strongly convex with two gibbosities on anterior margin and deeply sulcate between; sides with two, possibly more,

more or less distinct teeth; all femora strongly toothed; no tooth on inside of anterior tibiae.

Head covered by coarse yellow scales down to antennal sockets, surface below densely punctate, a small elevation where tubercles usually are; the usual ridge on each side of occiput. Antennae reddish brown, of the usual proportions. Prothorax as long as wide, strongly convex, an enlargement over the occiput consisting of an elevation with a deep median depression, this depression extending to a less marked degree down the middle of the thorax; surface beneath the coarse yellow scales with coarse, rugose, and often confluent punctures; sides with a prominent tooth anteriorly and a less prominent one in the middle and a trace of a third tooth on one side, also the usual apical and basal tooth. Elytra much wider than thorax, convex, with prominent humeri and a strongly marked basal callosity on each side of the scutellum; lateral margin distinctly serrate; surface with coarse, contingent, and somewhat irregularly shaped punctures, having transverse ridgings or wrinklings; scales at apex and sides forming a yellow band. Body beneath covered with coarse pale scales, all the femora distinctly toothed; anterior tibiae without the usual inner tooth. Length 6.5 mm.; width 3.2 mm.

*Type*.—I have examined the type, which is in the British Museum of Natural History.

*Type locality*.—Bahia, Brazil.

*Remarks*.—The unusual development on the anterior part of the prothorax distinguishes this from all other species. Otherwise the thorax resembles that of the two following species, which have only a slightly thickened anterior margin to the thorax. These three species are closely related and present striking differences from the rest of the genus in their strongly convex, narrow thorax with an anterior enlargement, as well as the more developed elytral callosities at the base, and the pale band at the apex. Two of the three have all the femora toothed.

The specimen sent me by the British Museum bears Jacoby's own label and contrary to both his and Lefèvre's description has two quite distinct teeth on the sides of the thorax and a trace of a third tooth on one side.

MYOCHROUS CRASSIMARGINATUS, new species

PLATE 5, FIGURE 2

From 6 to 7 mm. in length, dark piceous, sometimes with a faint greenish luster beneath the wide, closely appressed brown and white scales, thorax as long as broad with a thickened anterior margin over the occiput, with three lateral teeth (two of these usually inconspicuous); a distinct basal callosity on each elytron; punctation unusually fine; anterior tibiae and hind femora toothed.

Head covered by brown and white scales down to antennal sockets,

area between antennal sockets with a few fine white scales; the usual ridge on each side of the occiput, a median line down front; punctures small and well spaced. Antennae of the usual proportions, reddish brown. Prothorax as long as wide, strongly convex, with rather straight sides having three lateral teeth, two of which are inconspicuous, also one at basal and apical angles; along middle of the anterior margin, over the head, a thickening with a ridge running down at right angles at each end and between these, behind the margin, a depression; also a depression along the basal margin; punctuation rather fine and dense, under the broad, closely appressed, brown and white scales, scales as broad as in *squamosus*. Elytra considerably wider than prothorax, convex, a sharp humeral prominence and unusually well-developed basal callosity on each side of scutellum over which a trace of costae; area about scutellum depressed; striate punctures small, well spaced, with a tendency to transverse ridging; punctures becoming finer toward apex; lateral margins serrate entire length; scales broad, closely appressed, with finer scales beneath; scales at apex mostly white. Body beneath lightly covered with a somewhat less coarse white scaliness, not coarsely punctate. Hind femora bluntly toothed and anterior tibiae toothed. Length 5.8 to 6.8 mm.; width 3-3.5 mm.

*Type and paratypes*.—Type male, Museum of Comparative Zoology type No. 28118; one paratype, U.S.N.M. No. 59137; three paratypes in the British Museum.

*Type locality*.—The only label on the type is "Jacoby 2nd collection" (in Bowditch collection), but apparently it belongs to the same series as those in British Museum, labeled "Cayenne," one in Thomson collection, one in Baly collection, and two, Laferté.

*Remarks*.—This is clearly very closely related to *M. curculionoides* Lefèvre. Although the anterior margin of the thorax has not so great a development, there is a pronounced thickening there. The punctuation throughout is much finer and less dense. Unlike *curculionoides* this species has a tooth on the inner side of the anterior tibiae and the anterior femora are not toothed. There is a similar pale coloring of the scales at the apex of the elytra, but the scales are much wider than in *curculionoides* and resemble the scales of *M. squamosus*.

MYOCHROUS LEUCURUS, new species

PLATE 5, FIGURE 4

About 7.5 mm. in length, broadly oblong, shining black with a faint greenish or purplish luster beneath the broad, flatly appressed brown and white scales, scales forming a white band at apex of elytra; punctuation dense, the elytra irregularly striate-punctate with many transverse wrinklings distorting the punctures; thorax much narrower than elytra, as long as broad, with a thickened anterior margin and angulate

(scarcely 3-toothed) lateral margin, strongly convex; anterior and posterior femora bluntly toothed, anterior tibiae with inner tooth.

Head covered with broad scales to the antennal sockets, below this the scales less dense and finer; surface beneath densely but not rugosely punctate, with a faint depressed median line and on each side of occiput a distinct ridge. Antennae reddish brown, the joints of the usual proportion (last four missing). Prothorax just about as long as wide, strongly convex, with a thickened anterior margin having on each side a narrow ridge running down a little way, and a slightly depressed area between the ridges, and behind the margin; sides more angulate than 3-toothed, with the usual basal and apical toothing; depressed along the basal margin; surface beneath the scales shining, densely and moderately coarsely but on the disk not rugosely punctate, the punctures on the sides running together in long striations with ridgings between. Elytra much wider than thorax, distinctly serrate along the sides, a pronounced basal callosity on each side of scutellum, and prominent humeri with a deep intrahumeral sulcus and a transverse depression below; punctation irregularly striate, the punctures dense and not round but distorted by the transverse wrinklings in basal half and on sides; scales broad, closely appressed, brown and white with a broad white band at apex and also along the sides. Body beneath not so densely squamulose, the scales not so wide, but closely appressed, first abdominal segment not coarsely punctate. Anterior and hind femora bluntly toothed; anterior tibiae with a strong inner tooth. Length 7.6 mm.; width 4 mm.

*Type*.—In Bowditch collection, Museum of Comparative Zoology type No. 28119.

*Type locality*.—Cayenne, "e coll. Chevt."

*Remarks*.—This is the largest of the three species in the *curculionoides* group, and unlike *curculionoides* it has a modified thickening of the anterior margin of the prothorax similar to that of *crassimarginatus*, and likewise has a tooth on the inner side of the anterior tibiae. The very wrinkled appearance of the elytra is unlike that of either of the other species. The punctures are not rounded but more stellate and irregular. As in the other two species, there are gibbosities at the base of the elytra and the scales at the apex are pale. Like them, too, the thorax is much narrower than the elytra.

#### MYOCHROUS ARMATUS Baly

##### PLATE 6, FIGURE 5

*Myochrous denticollis* BOHEMAN (nec Say), Eugénies Resa, Insects, p. 161, 1858.

*Myochrous armatus* BALY, Trans. Ent. Soc. London, ser. 3, vol. 2, p. 336, 1865.

*Myochrous bohemani* LEFÈVRE, Ann. Soc. Ent. France, ser. 6, vol. 4, Bull., p. lxxvi, 1889.

From 6 to 7 mm. in length, broadly oblong, the thorax about half as long as the elytra, shining black with a slight bronzy luster beneath

the short, somewhat curved, brown and white scales, thorax 3-toothed, a little broader than long, densely covered by round deep punctures; aedeagus with an unusually long, slender point at the tip.

Head covered with brown and white closely appressed scales down to the antennal sockets, lower front with finer, sparser pubescence; densely punctured beneath and rugosely punctured over the occiput, front with a median furrow, the usual occipital ridge on either side. Antennae reddish brown of the usual proportions. Prothorax large, about one-half as long as the elytra, distinctly wider than long, moderately convex, depressed along the base, especially over the scutellum; punctures round, deep and dense, covered by short curved scales; the three lateral teeth well developed and the usual tooth at the basal and anterior angles. Elytra broad, with a slight basal callosity and a little tendency toward costation in basal half; striate punctation about scutellum deep and depressed, elsewhere punctures not very coarse and well spaced; the brown and white scales short, dense, and somewhat curved, not entirely concealing the sculpture. Body beneath shining piceous with a reddish brown tip to abdomen and dark reddish brown to piceous legs; first abdominal segment somewhat coarsely and often moderately densely punctate; scales fine and sparse. Hind femora toothed, anterior tibiae with the usual tooth on the inner side. Length 5.8 to 6.5 mm.; width 2.8 to 3.2 mm.

*Type*.—In British Museum.

*Type locality*.—Brazil.

*Other localities*.—BRAZIL: Rio de Janeiro, Rio Grande de Norte (W. M. Mann); URUGUAY: Maldonado (C. Darwin); Rivera (P. A. Berry); ARGENTINA: Buenos Aires Province: July to September 1919 (H. E. Box, also C. Burch); Delta Paraná, Carapecha (F. Monrós), Gálvez (F. Monrós), Luján, García, Punta Lara (F. Monrós), Capital Federal (F. Monrós); Güemes, Salta Province (H. A. Jaynes); Rio San Javier, Santa Fé (G. E. Bryant, May 1912), Santiago del Estero, Tucumán; Resistencia, Chaco, Martínez; Chile (collected by Germain).

*Remarks*.—Both *M. bohemani* Lefèvre and *M. armatus* Baly were described from Brazil a few years apart. I have examined a cotype of *M. armatus* and the type of *M. bohemani* (*denticollis* Boheman) and find them nearly identical in appearance. The large size, the very densely punctate thorax, which is approximately one-third the length of the beetle, and the exceptionally long attenuated tip to the aedeagus characterize this species. It appears to be well distributed over the southern part of South America.

MYOCHROUS BRYANTI, new species

PLATE 6, FIGURE 1

From 5.4 to 6.5 mm. in length, broadly oblong, deep bronzy black, thorax one-third the length of beetle, nearly as wide as elytra and

densely covered by round deep punctures becoming coarser toward base; elytra lacking any basal callosity, striate punctures near base unusually coarse and transversely ridged; scales exceptionally coarse, curved, and mottled brown and grayish.

Head covered by short brown and gray scales down to antennal sockets, surface below obsolete punctate, an impressed median line down front, the usual occipital ridge on each side. Antennae of the usual proportions, reddish brown. Prothorax a little wider than long, almost as wide as elytra and one-third the length of the beetle, 3-toothed, moderately convex, with a depression along basal margin, densely and moderately coarsely but not confluent punctate, the punctures round and deep and a little coarser toward base. Elytra without any basal callosities, a short intrahumeral sulcus and a slight depression below the humerus; punctures very coarse and transversely ridged in basal portion, and hidden by the mottled brown and gray curved scales that are unusually coarse. Body beneath shining bronze under the fine white scales, first abdominal segment coarsely punctate. Hind femora bluntly toothed; anterior tibiae with the usual inner tooth. Length 5.4 to 6.5 mm.; width 2.6 to 2.9 mm.

*Type and paratypes.*—Type male and one paratype in British Museum, collected in November 1903, by G. E. Bryant; two paratypes in Museum of Comparative Zoology; one paratype, U.S.N.M. No. 59135.

*Type locality.*—Trinidad, British West Indies.

*Other localities.*—TRINIDAD: Capara Valley, Port of Spain, January 1897 (Dr. Rendall); 7 miles north of Moruga village (June 13, 1925, P. A. Andrews); Montserrat (June 29, A. Busck); Palo Seco (October 20, 1948, H. Morrison).

*Remarks.*—The large densely punctate thorax of this species resembles that of *M. armatus* Baly, but it is a shorter smaller species, with a shorter attenuated point at the tip of the aedeagus. All the nine specimens examined have come from Trinidad.

#### MYOCHROUS FIGUEROAE Brèthes

##### PLATE 6, FIGURE 3

*Myochrous figueroae* BRÈTHES, Nunquam Otiosus, vol. 4, p. 16, 1925.

“Subelongatus, nitidus, vix indistincte cupreo-nitens subtus modice magis cupreo- hic illic subaeneo-nitens, haud appresso fulvo-squamulatus, clypeo, antennis palpisque ferrugineis, his articulo ultimo piceo. Long. 6 mm.

“La tête et le pronotum ont une ponctuation assez grosse, non dense, le front avec une impression longitudinale. Le prothorax est plus long que large, le bord antérieur légèrement avancé en arc sur la tête, le bord postérieur avec une légère crête apicale et une impression pres de l'écusson, les bords latéraux avec trois petites dents mousses. Les élytres à peine plus larges et deux fois plus longues que le prothorax,

la ponctuation comme celle du pronotum, et serriée, les espaces non relevés; cependant le premier espace latéral est presque en crête aigue surtout près du callus. La ponctuation du dessous du corps est bien moins forte qu'en dessus; une forte impression médiane sous le 5 segment de l'abdomen. Les pattes sont subégales, les cuisses en massue, les tibias antérieurs avec une dent au côté inférieur vers le tiers apical.

"Un exemplaire recueilli à La Plata le 12, IV, 1923 par mon élève, Mr. Robert Figueroa López, qui est une vraie espérance pour l'Entomologie Argentine."

*Remarks.*—F. Monrós, of the Institute Miguel Lillo at Tucumán, Argentina, has sent me two specimens about which he writes as follows: "One species has been compared with one in Brèthes collection in Buenos Aires labeled *Myochrous platensis* which I believe is that one he later described as *M. figueroae* Brèthes, 1925. So this material could be homotypic." Both specimens unfortunately are females. In general appearance they resemble closely *M. armatus* Baly, but I believe they are not that species. The thorax is not so large and is not one-third the length of the beetle as is usual in most specimens of *M. armatus*. Furthermore, the punctation of the thorax is more ridged toward the base and the punctation of the elytra coarser and with less interspacing, and, except at the base, the rather pronounced costae usual in *M. armatus* are lacking. Both specimens were taken in the delta of the Paraná River, in Buenos Aires Province.

MYOCHROUS SAPUCAYENSIS, new species

PLATE 6, FIGURE 2

About 5.5 mm. in length, elongate oblong, shining black with short pale scales; thorax nearly as long as wide, not very convex, 3-toothed, very densely and coarsely but not rugosely punctate; elytra not much wider than thorax.

Head covered by short, closely appressed brown and white scales to antennal sockets, lower front with very short and indistinct scales or hairs, a median line down occiput and the usual ridge on either side. Antennae deep reddish brown, of the usual proportions. Prothorax not quite so long as wide, and about half as long as the elytra, rather flat, with a transverse depression anteriorly and a slight basal depression most marked in the middle, three well-developed lateral teeth and a small apical and basal tooth, surface very densely and deeply punctate, the punctures round and regular, not rugose or confluent, scales rather short and curved, in this single specimen examined much rubbed and not concealing the punctures. Elytra not much wider than thorax, with little trace of a basal callosity, a slight transverse depression in basal half; punctation coarse, deep, and dense, with a little tendency toward transverse ridging in basal

portion; scales short, curved, brown and white (much rubbed). Body beneath with scanty fine pale hairs, first abdominal segment rather coarsely and densely punctate. Hind femora bluntly toothed; anterior tibiae with inner tooth. Length 5.6 mm.; width 2.6 mm.

*Type*.—A male, U.S.N.M. No. 59031, collected in March by W. T. Foster.

*Type locality*.—Sapucay, Paraguay.

*Remarks*.—This species resembles *M. armatus* Baly in having a broad and densely punctate prothorax, but is smaller and with finer sparser scales and a shorter tipped aedeagus.

MYOCHROUS NORMALIS, new species

PLATE 4, FIGURE 1

About 6 mm. in length, elongate oblong, shining piceous beneath the closely appressed gray scales, prothorax not very convex, with three large lateral teeth, coarsely, densely, and rugosely punctate.

Head covered by short, closely appressed scales down to antennal sockets, with a fine median line, rugosely punctate beneath the scales; occiput concealed in the single specimen examined. Antennae and mouthparts reddish brown; antennae extending below the humeri, of the usual proportions. Prothorax not quite so long as wide, not very convex, with a slight anterior depression and a basal depression most marked over the scutellum; sides with three well-developed teeth in addition to the apical and basal teeth; surface coarsely, densely, and rugosely punctate. Elytra without marked basal callosity, a faint trace of transverse depression on the side below the intrahumeral sulcus; striate punctures coarse, dense, but not ridged, showing through the short gray scales. Body beneath and legs not so deep in coloring and only sparsely covered with finer scales, especially the abdomen; first abdominal segment moderately coarsely punctate. Hind femora indistinctly toothed; anterior tibiae with the usual inner tooth. Length 6.3 mm.; width 2.9 mm.

*Type*.—A male, Museum of Comparative Zoology type No. 28120, collected by Dr. Bohls.

*Type locality*.—San Salvador, Paraguay.

*Remarks*.—This species is a typical *Myochrous* and similar to others of the genus with few distinctive features to mark it. It is smaller and more slender than *M. armatus* Baly and with a more rugosely punctate prothorax. The aedeagus is similar to that of many of the North American species, notably the West Indian species, but with a slightly shorter tip.

MYOCHROUS STENOMORPHUS, new species

PLATE 6, FIGURE 4

About 5 mm. in length, elongate oblong, reddish brown, covered above by short and broad, pale, closely appressed scales; thorax

strongly convex, as long as wide, with three minute lateral teeth, punctation dense and moderately fine, not confluent; elytra narrowly elongate.

Head covered by pale scales down to antennal sockets, the underlying punctation not visible, a faint depressed median line, and faint trace of occipital ridging in one specimen. Antennae orange brown, of the usual proportions and rather long. Prothorax as long as wide, smoothly and strongly convex, with a slight depression along basal margin, the sides feebly rounded, almost straight, armed with three minute teeth, and the usual basal and apical tooth; punctures dense but not confluent and not very coarse, surface not at all ridged. Elytra with small basal callosities and a transverse depression below; striate punctures moderately coarse in basal half without transverse ridging, almost completely hidden by the broad, pale, closely appressed scales. Body beneath less densely scaly, the abdomen with fine hairs, and the first segment finely punctate. Hind femora not distinctly toothed; anterior tibiae with small tooth on inner side. Length 4.9 to 5.0 mm.; width 2.3 mm.

*Type and paratype*.—Type in the British Museum, Baly collection; one paratype, U.S.N. No. 59136.

*Type locality*.—? Pampas, Argentina.

*Remarks*.—The British Museum has other specimens that I have not examined, presumably of this species. The old handwritten label on the two specimens that I have examined is faded and nearly illegible but it appears to be endorsed "Pampas." The beetles have a shape similar to that of the North American species *M. longulus* LeConte, being unusually narrow and elongate. The aedeagus is much longer than in that species and it has a longer tip.

MYOCHROUS MONROSI, new species

PLATE 6, FIGURE 6

Approximately 6.5 to 7 mm. in length, oblong, reddish brown, covered by pale brownish scales, prothorax as long as wide and nearly as wide as elytra, strongly convex, with three small sharp lateral teeth, densely and moderately coarsely punctate; elytra with dense, coarse punctation.

Head beneath the scales rough, with coarse shallow punctation, a faint medium vertical line, the usual ridge on either side of occiput not well developed. Antennae of the usual proportions. Prothorax fully as long as broad, strongly and evenly convex with nearly straight sides having three small sharp teeth not very conspicuous and with an unusually small apical and basal tooth; a slight basal depression over the scutellum and a thickening along the anterior margin over occiput; surface densely and shallowly punctate, the punctures tending to be elongated and in lines with interspaces alutaceous, not at all

shiny. Elytra over twice as long as prothorax and a little wider, moderately convex with small humeri and a short intrahumeral depression and little trace of basal callosities; punctation coarse, dense, and in basal half sometimes a little confused, otherwise striately punctate; two fairly well marked costae; scales short, closely appressed, moderately wide and presenting a somewhat mottled appearance, almost concealing the sculpture beneath. Body beneath less densely and coarsely pubescent, abdominal segments closely punctate. Length 6.6 to 6.9 mm.; width 3 mm.

*Type and paratype*.—Type female in Institute Miguel Lillo, Tucumán, Argentina, collected December 3, 1948, by F. Monrós; paratype, a male, U.S.N.M. No. 59225, collected at Ledesma, Jujuy Province, Argentina, December 1, 1948, by F. Monrós.

*Type locality*.—Lombreras, Salta Province, Argentina.

*Remarks*.—This species is closely related to *M. stenomorphus* and the pair is strikingly unlike any other species from South America. *M. monrosi* resembles *M. stenomorphus* in being of the same reddish-brown coloration and in having a similar convex, straight-sided prothorax with tiny teeth. Even the aedeagus is similar although heavier. Unlike *M. stenomorphus*, this is one of the largest of South American species of *Myochrous*, being as large as *M. armatus*. I take pleasure in naming it after its collector, Ing. Francisco Monrós, who has published excellent work on Chrysomelidae.

#### MYOCHROUS IMMUNDUS Erichson

#### PLATE 5, FIGURE 1

*Myochrous immundus* ERICHSON, Archiv für Naturg., vol. 13, p. 164, 1847.

About 6 mm. in length, elongate-oblong, black, shining with a bronzy luster beneath the long brown and white hairlike scales, intermingled with shorter, broader, and more appressed scales; prothorax as long as wide with rounded sides having three teeth marked by a tuft of hairs on each, very densely and coarsely punctate. Anterior tibiae without conspicuous inner tooth.

Head covered with pale pubescence, on occiput fine and not hiding the dense punctation below, in lower front becoming slightly coarser, between the antennal sockets lightly hairy, the usual occipital ridges if present at all very indistinct. Antennae and mouthparts reddish brown, antennae extending a little farther than usual, the third joint longer than fourth. Prothorax fully as long as wide, with rounded sides, not very convex, the three lateral teeth accentuated by a tuft of hairlike scales; a slight transverse depression anteriorly and a deeper one along the basal margin; punctures coarse and very dense, particularly toward the base; pubescence dense, the longer scales not closely appressed and somewhat concealing the shorter broader ones

below. Elytra nearly two and a half times as long as prothorax, moderately convex, with a slight transverse depression below the basal callosities; punctation not very coarse, well spaced, becoming finer in apical half and not entirely concealed by the rather long pubescence; as in the case of the prothorax, beneath the longer hairs a shorter thicker set of more closely appressed scales. Body beneath not very densely pubescent, with broader scales beneath the thorax and on the sides and finer, longer scales on the abdomen and legs; densely and moderately coarsely punctate. Legs deep reddish brown; anterior tibiae without the usual conspicuous tooth in the inner side, but a small tooth almost hidden in the long hairy vestiture and situated somewhat farther from the apex than usual and seen with difficulty; posterior femora toothed; claw joints unusually long. Length 5.8 to 6.4 mm.; width 2.8 to 3 mm.

*Type*.—In Berlin Museum?

*Type locality*.—Peru.

*Other locality*.—Chile.

*Remarks*.—Although nomenclatorially the type of the genus, *M. immundus* is morphologically one of the least typical species, being peculiar in having long hairlike scales in addition to the shorter broader scales beneath, and in having only a very inconspicuous tooth on the inside of the anterior tibiae which Erichson overlooked. It also has unusually long claw joints and long antennae.

#### MYOCHROUS EXPLANATUS Baly

#### PLATE 5, FIGURE 3

*Myochrous explanatus* BALY, Trans. Ent. Soc. London, ser. 3, pt. 4, p. 335, 1865.

From 8 to 9.5 mm. in length, oblong, deep reddish brown, shining beneath the short closely appressed yellowish scales; thorax not at all convex but flattened out toward the margin, with the margin varying from being almost arcuate, with three faint undulations, to having three well-developed lateral teeth; neither thorax nor elytra very densely or coarsely punctate.

Head covered with scales to the antennal sockets, beneath the scales surface rugosely and coarsely punctate, a median line down front ending in a broad shallow depression; the usual occipital ridge on either side. Antennae reddish brown, not extending much beyond the humeri, the outer joints not greatly enlarged. Prothorax considerably wider than long, not convex but flattened out on the sides with a depressed line along the base and a shallow depression on either side near the base; the margin varying from being almost arcuate or slightly undulate to distinctly 3-toothed, with a small tooth at apical and basal angles; surface beneath the fine, closely appressed yellow scales shining, finely and not densely punctate, the punctures becoming

coarser and denser toward the base, and interspersed with fine, shallow punctation (scale scars). Elytra not very convex, with small humeral prominences and two poorly defined costae in the basal part of each elytron, the striate punctation beneath the short, closely appressed yellowish scales unusually fine, leaving as wide an interspace between the punctures as the punctures themselves. Body beneath rather densely covered with scales, those on the prosternum much wider than elsewhere on the beetle, those on the abdomen and legs finer; first abdominal joint not coarsely punctate. Posterior femora not distinctly toothed, anterior tibiae with a blunt, rather inconspicuous tooth beneath the long hairs. Length 8 to 9.5 mm.; width 3.7 to 4.1 mm.

*Type*.—In British Museum of Natural History; a cotype examined.

*Type locality*.—Caracas, Venezuela.

*Other localities*.—VENEZUELA: Orinoco River, Mapire, Bolívar Province, Lake Laglaize: COLOMBIA; BOLIVIA.

*Remarks*.—This is the largest as well as flattest species of *Myochrous* yet to be found, and is distinguished by the flattened sides of the prothorax with a margin usually only undulate, yet occasionally with three well-developed teeth.

#### MYOCHROUS SALLEI Baly

##### PLATE 7, FIGURE 6

*Myochrous sallei* BALY, Trans. Ent. Soc. London, ser. 3, pt. 4, p. 335, 1865.

From 7 to 8 mm. in length, elongate, reddish brown, densely covered by closely appressed, short, white scales; thorax projecting over head and almost concealing it, fully as long as wide and strongly convex in front, inconspicuously 3-toothed.

Head covered by dense white scales down to antennal sockets, lower front less scaly, a median depressed line down front, upper part of head and occiput overhung by anterior part of thorax. Antennae longer than usual, extending down below the humeri, but of the usual proportions, bright reddish brown. Prothorax about as long wide, strongly convex in anterior part where it projects forward, with a thickened anterior margin almost concealing the occiput; depressed along the basal margin, especially over the scutellum; sides very little curved, nearly straight, with three tiny teeth; punctation dense, deep and coarse, becoming even coarser toward base and making the surface rugose with transverse ridging; some finer superficial punctures (scale scars). Elytra over twice as long as thorax, narrowly elongate, with small humeri, a slight trace of basal callosity and slight depression about scutellum; punctation coarse, contiguous, with transverse ridging in basal half, punctures becoming finer and more spaced toward the apex, scales dense, white, closely appressed and rather short and wide. Body beneath covered by white scales nearly as densely

as above except in the middle of the abdomen, first abdominal segment densely and finely punctate. Hind femora without distinct tooth, anterior tibiae with the usual inner tooth. Length 6.8 to 8.2 mm.; width 2.6 to 3.2 mm.

*Type*.—In British Museum of Natural History; a cotype examined.

*Type locality*.—Mexico.

*Other localities*.—MEXICO: Oaxaca, Playa Vicente, Sallé collection.

*Remarks*.—In its elongate shape, reddish brown coloration under the white scales, and convex thorax, *M. sallei* somewhat resembles *M. magnus* Schaeffer. It has white instead of yellow scales, is more slender, and has tinier teeth on the prothorax. The white scales make it one of the palest of the genus.

MYOCHROUS BRUNNEUS, new species

PLATE 7, FIGURE 5

About 5.5 mm. in length, elongate oblong, shining, deep reddish brown with short, closely appressed yellowish scales, thorax wider than long, convex, 3-dentate, and with coarse but not dense punctures; elytra with well-spaced striate punctation.

Head covered with short, closely appressed yellowish scales down to antennal sockets with the usual occipital ridge on each side and a median line down the front, lower front with a few short finer scales. Antennae deep reddish brown, of the usual proportions. Prothorax wider than long with three well-developed lateral teeth and the usual smaller apical and basal tooth; moderately convex, with a basal depression most marked over the scutellum; surface lustrous, coppery, with round, deep punctures not closely placed and becoming larger toward base. Elytra similarly lustrous beneath the short, yellowish scales, the striate punctures not closely set, becoming finer at apex; very little evidence of a basal callosity, and only a faint transverse depression. Body beneath shining under the short, sparse, fine scales, first abdominal segment with sparse coarse punctures. Hind femora bluntly toothed, anterior tibiae with the usual inner tooth. Length 5.3 mm.; width 2.4 mm.

*Type*.—A male, Museum of Comparative Zoology type No. 28124.

*Type locality*.—Amazon Valley, near Santarém, Brazil.

*Remarks*.—This is one of the reddish-brown species, distinguished by its sparse punctation, strongly convex thorax, and short, thickset aedeagus.

MYOCHROUS LONGIPES, new species

PLATE 1, FIGURE 2

About 6 mm. in length, oblong, deep reddish brown to shining bronze, densely covered by short, pale brown or grayish, closely appressed scales; thorax wider than long, rounded in the middle, 3-

toothed, with moderately dense, not coarse punctures; legs unusually long, reddish brown.

Head with a median line down occiput and the usual ridge on each side, surface somewhat rugose, covered by scales down to antennal sockets, lower front with fewer and finer scales. Antennae reddish brown, of the usual proportions. Prothorax wider than long, with three distinct lateral teeth, not very convex, but rounded over the middle, without depressions except along the basal margin; beneath the pale brown and grayish scales the surface moderately densely but not coarsely or rugosely punctate. Elytra two and a half times as long as thorax and considerably broader, with a distinct basal callosity on each side of the scutellum and behind this a slight transverse depression; striate punctures rather fine and not closely placed and becoming finer toward the apex, the short, coarse scales completely hiding the punctation and forming a pale mottled covering. Body beneath shining under the sparse pale scales, first abdominal segment rather sparsely punctate. Hind femora not distinctly toothed, anterior tibiae with a tooth on the inner side; tibiae unusually long. Length 5.3 to 6 mm.; width 2.5 to 2.7 mm.

*Type*.—A. male, U.S.N.M. No. 59029, collected in May 1925 by G. L. Harrington.

*Type locality*.—Chuani, Department of La Paz, Bolivia.

*Other localities*.—COLOMBIA: Cali (Rosenberg; in Bowditch collection); PERU: Chira; BOLIVIA: Huachi, Department of La Paz (June 1925; G. L. Harrington); BRAZIL: "Amazon," first Jacoby collection, Bowditch collection; Amazon River, Arary to Manáos; near Obidos (Holt, Blake, and Agostini); VENEZUELA (from culm of "guasduz"), Orinoco River near Mapiri, state of Bolívar (F. A. McClure).

*Remarks*.—This species is characterized by its short, even, scaly covering that completely hides the coppery or bronzy surface below, and by the rather long tibiae and the broad prothorax, which is rounded in the middle.

#### MYOCHROUS MAMORENSIS, new species

#### PLATE 8, FIGURE 5

About 5.5 mm. in length, oblong oval, reddish brown, mottled with broad, dense, yellow and brown scales; thorax densely but not very coarsely punctate, with 3-toothed margin, and anterior margin projected over the head; thorax about half as long as elytra and a little wider than long.

Head covered by scales concealing the rough, densely and obsolete punctate surface beneath, a median depression becoming a median ridge in the lower frontal transverse depression; scales between antennal sockets short and fine and transversely placed. Antennae of the

usual proportions. Prothorax a little wider than long and about half as long as elytra, the anterior margin somewhat thickened and projecting over the head; sides 3-toothed, surface covered by dense, round punctures becoming coarser toward base and nearly concealed by the broad, curved, brown and white scales; depressed along basal margin, especially over the scutellum. Elytra with a transverse depression below basal callosities; densely covered by the broad, curved, brown and yellow scales, scales producing an irregularly mottled appearance and nearly concealing the striate punctation below; punctures well spaced and becoming finer toward apex with a tendency to ridging in basal part. Body beneath lightly covered by finer white scales, punctation on first abdominal segment not coarse or dense. Anterior tibiae with the usual toothing. Length 5.3 to 6 mm.; width 2.5 to 2.8 mm.

*Type and paratypes*.—Type and one paratype in Miguel Lillo Institute, Tucumán, Argentina, collected January 3, 1949, by Kuschel; one paratype, U.S.N.M. No. 59365; one paratype in Museum of Comparative Zoology.

*Type locality*.—Mamoré (? river), Trinidad, Bolivia.

*Remarks*.—This is one of the reddish-brown species, with a thickened anterior margin on the prothorax concealing the head. Only one other South American species has these two characteristics together, *M. bolivianus*, which is a stouter beetle having a quite different scale pattern.

#### MYOCHROUS PORTORICENSIS Blake

#### PLATE 7, FIGURE 1

*Myochrous portoricensis* BLAKE, Proc. Ent. Soc. Washington, vol. 49, p. 25, 1947.

From 5 to 6 mm. in length, oblong, shining dark brown to piceous black, beneath the dense pale scales. Prothorax covered with round, deep, but not at all confluent or ridged punctures; elytra with the striate punctures not so closely placed as in *cubensis* Blake.

Head covered by scales down to antennal sockets; a faintly depressed median line down front ending in a broad shallow depression; punctation deep, coarse, but not ridged, and lower front less densely punctate than in *cubensis*; the usual occipital ridges on either side. Prothorax a little wider than long with three well-developed lateral teeth and a slight depression along basal margin most marked over the scutellum; punctures not very coarse, round, deep, and so spaced as not to be confluent or ridged. Elytra with striate punctures well-spaced, not so close as in *cubensis*, coarse in basal part, becoming much finer toward apex. Body beneath with finer, sparser scales, punctures on first abdominal joint fine, not very dense. Hind femora inconspicuously toothed, anterior tibiae with the usual tooth. Length 5.2 to 6 mm.; width 2.4 to 3 mm.

*Type*—U. S. N. M. No. 57986, collected in February 1899 by August Busck.

*Type locality*.—Arroyo, Puerto Rico.

*Other localities*.—PUERTO RICO: Lake Guanica (A. Wetmore), in stomach of *Oxyechus*, May 26, 1912; May 31, 1938, same locality (P. J. Darlington).

*Remarks*.—The less coarsely punctate upper surface with no thoracic ridging distinguishes this from *cubensis*.

MYOCHROUS HISPANIOLAE Blake

PLATE 7, FIGURE 2

*Myochrous hispaniolae* BLAKE, Proc. Ent. Soc. Washington, vol. 49, p. 24, 1947.

From 5.5 to 6.8 mm. in length, elongate oblong, shining dark brown to piceous black, with pale scales, thorax with dense, deep, round punctures, not confluent or forming ridges or rugosities; elytra densely striate punctate.

Head covered with scales to antennal sockets, beneath the scales a very indefinite median line ending in the middle of the front in a shallow depression; coarse, dense, shallow, confluent punctures forming a network of irregular lines over the entire front, the usual occipital ridges on each side. Antennae yellowish or reddish brown, of the usual proportions. Prothorax not quite so long as broad, narrower than in *cubensis* or *portoricensis*, and with a depression along the basal margin most marked over the scutellum. Lateral margin with three well-developed teeth, disk not very convex and covered with dense, round punctures, not at all confluent or ridged and not very coarse. Elytra with faint basal callosities and a transverse depression below; punctuation dense, not well spaced as in *portoricensis*, and with a slight tendency to transverse ridging in the depression near the base. Body beneath shining under the fine, sparse hairlike scales, first abdominal segment rather finely and not very densely punctate. Hind femora with a blunt tooth, anterior tibiae with the usual tooth. Length 5.4 to 6.8 mm.; width 2.6 to 3.2 mm.

*Type and paratypes*.—Type and four paratypes, Museum of Comparative Zoology, collected September 11, 1934, by P. J. Darlington; one paratype, U.S.N.M. No. 57985.

*Type locality*.—Swamps north of Dessalines, Haiti.

*Other localities*.—DOMINICAN REPUBLIC: Montecristi, June 1938, Sánchez, July 1938, Puerto Plata, August 20 to September 2, 1938 (all collected by P. J. Darlington): HAITI, Etang Lachaux, 1934; Miragoâne, October 30 to November 2, 1934; Emery (1,000 feet altitude) September 11, 1934, Trou Caiman, September 4, 1934 (all collected by P. J. Darlington).

*Remarks*.—This species appears to be a little more slender than *M. cubensis* and with a narrower prothorax. The sculpture of the head

differs from both *cubensis* and *portoricensis* in being so densely punctate as to present a network of lines over the occiput. The thorax also is very densely and rather finely punctate without any ridgings or rugosities.

MYOCHROUS JAMAICENSIS Blake

PLATE 7, FIGURE 3

*Myochrous jamaicensis* BLAKE, Proc. Ent. Soc. Washington, vol. 49, p. 26, 1947.

About 6 mm. in length, elongate oblong, shining piceous black, covered by pale scales; thorax densely punctate, with the punctures somewhat elongate and in short lines, giving the surface a slightly ridged effect, but not so deeply ridged as in *cubensis*.

Head covered with scales down to the antennal sockets, beneath the scales a poorly defined median line down front and dense coarse punctures making surface rugose, lower front finely and sparsely punctate; the usual occipital ridges on each side. Antennae reddish brown, of the usual proportions. Prothorax wider than long, moderately convex, with three well-developed lateral teeth and the usual apical and basal teeth; a depressed line along the basal margin most pronounced over the scutellum; surface densely and rugosely punctate, the somewhat elongate punctures occurring in short lines, often confluent, but not forming such deep ridges as in *cubensis*. Elytra with a slight basal callosity and faint transverse depression below; the rows of punctures closely placed and not very coarse or with transverse ridgings. Body beneath with the first abdominal segment rather finely punctate. Hind femora bluntly toothed, anterior tibiae with the usual tooth. Length 6 mm.; width 2.7 mm.

*Type*.—A female, U.S.N.M. No. 57997.

*Type locality*.—Manchioneal, Jamaica, collected January 30, 1937, by E. A. Chapin and R. E. Blackwelder.

*Remarks*.—*M. jamaicensis* appears to be halfway between the Cuban and the Hispaniolan species. Although there is a tendency toward ridging on the thorax, the ridges are not so dense or so deeply cut and the punctation is not so close as in *cubensis*. The thorax is not so heavy as in *cubensis*, in this respect resembling that of *hispaniolae*.

MYOCHROUS CUBENSIS Blake

PLATE 7, FIGURE 4

*Myochrous cubensis* BLAKE, Proc. Ent. Soc. Washington, vol. 49, p. 23, 1947.

From 4.5 to 6 mm. in length, elongate oblong, shining dark brown to piceous black, beneath the short, pale, not closely appressed scales; prothorax coarsely and rugosely punctate, with the elongate punctures often confluent and forming ridges; elytra moderately finely and densely striate punctate.

Head covered by scales to antennal sockets, with a faint, depressed, median line down front; punctuation beneath the scales coarse, sometimes confluent, dense, rugose, the usual occipital ridges on each side; lower front densely but not so coarsely punctate, with a short fine scale from each puncture. Antennae reddish or yellowish brown, of the usual proportions. Prothorax large, a little broader than long, almost as broad as elytra; evenly convex with a slight median basal depression over the scutellum; sides with three well-developed teeth as well as a basal and an apical tooth; punctuation coarse, deep, elongate, usually in confluent longitudinal lines. Elytra without any distinct basal callosities, a slight lateral depression below the humerus; punctuation not entirely hidden by the short, pale, somewhat curved scales; punctures comparatively rather fine and dense without transverse ridging. Body beneath lustrous under the short white hairlike scales, first abdominal segment rather densely but not coarsely punctate. Hind femora bluntly toothed, anterior tibiae with the usual inner tooth. Length 4.5 to 6.1 mm.; width 2 to 2.8 mm.

*Type and paratypes.*—Type and nine paratypes, U.S.N.M. No. 57984, collected by E. A. Schwarz; one paratype in the Museum of Comparative Zoology.

*Type locality.*—Cayamas, Cuba.

*Other localities.*—CUBA: Agramonte, Camagüey Province, July 2, 1934 (J. Acuña); Baraguá, May 16, 1927 (L. Scaramuzza, taken on *Capsicum* sp. on May 26, 1927, by the same collector on sugarcane, on June 12, 1925, by Lomanitz on sugarcane); Cape Covadonga, Zapata, "S. W.," September 16, 1936 (Davenport); Cape Jareno (H. K. Plank, feeding on sugarcane); Cape Velasco, November 4, 1930; Chaparra, July 10, 1915 (L. Scaramuzza, on sugarcane); Habana (Baker and Barbour); San Antonio de los Baños (José H. Pazos); Santiago de las Vegas, August 30, 1930 (S. C. Bruner; on May 20, 1923, by A. Otero).

*Remarks.*—The roughly sculptured prothorax distinguishes this from the other West Indian species. The aedeagi of the species from Cuba, Puerto Rico, Dominican Republic, and probably Jamaica (no male seen) are very much alike, but the beetles themselves consistently show minor differences. As in the case of the genus *Disonycha*, certain groups of species in *Myochrous* such as the present one are still not very far developed in their specific differences.

In an earlier paper on the species of *Myochrous* from the West Indies I discussed *Myochrous dubius* (Fabricius), which was described from a specimen collected in "America meridionali." The description does not fit very well any species of *Myochrous*, and it seems best not to attempt to apply this name at present.

## MYOCHROUS SPINIPES, new species

## PLATE 8, FIGURE 2

About 4 mm. in length, deep brown to picceous beneath the curved not closely appressed scales; pronotum dull, alutaceous, as long as wide, concealing the head, sides minutely 3-toothed; elytra shining; front tibiae with little trace of toothing before the apex but strongly spurred at apex; middle tibiae with a conspicuous spur before the apex and hind tibiae in male strongly spurred before apex.

Head broadly rounded over occiput with a faint trace of median line in some specimens; no trace of occipital ridges, surface alutaceous, punctate, covered by scales to antennal bases, space between antennal sockets shining under the transversely placed sparse white scales; labrum yellowish brown. Antennae pale and of the usual proportions. Prothorax projecting over the head and concealing it, fully as long as wide, rather flat with a depression behind the narrowed and somewhat elevated anterior portion; sides minutely 3-toothed with a strong toothing behind the eyes at apical angle and a small tooth at basal angle; surface dull, alutaceous, with moderately dense round punctures; scales not appressed but standing up in little curved loops all over the surface, not very dense. Elytra shining beneath the brown and white rather coarse and curved scales, the scales forming an irregular color pattern; striate punctures dense and moderately coarse, in some specimens a slight costa down the middle; very little basal elevation, a small transverse depression on the side below the humerus. Body beneath shining through the finer, pale scales; breast and first abdominal segment densely and coarsely punctate; anterior tibiae with a faint trace of an inner tooth near the apex and strong spurs at the apex; middle tibiae in both sexes toothed, hind tibiae in males sharply spurred before the apex. Length 3.5 to 4.5 mm.; width 1.5 to 2 mm.

*Type and paratypes.*—Type male and 28 paratypes, U.S.N.M. No. 59302, collected on rice June 8, 1949, by L. A. Salas; 2 paratypes in Museum of Comparative Zoology.

*Type locality.*—VENEZUELA: Acarigua, Portuguesa, collected on rice June 8, 1949, by L. A. Salas.

*Remarks.*—The spurs on the middle and hind tibiae shortly before the apex distinguish this species from all others in the genus. The anterior tibiae lack the usually well-developed spur before the apex. This peculiarity together with the small size and the long prothorax make the species easily recognized. A good series of beetles was sent to the U. S. Department of Agriculture from Venezuela with the note that they were damaging growing rice.

## MYOCHROUS CALCARIFERUS, new species

## PLATE 8, FIGURE 1

Between 4 and 5 mm. in length, elongate oblong, black, with the thorax approximately as long as wide, concealing head, and elytra more than twice as long as thorax; scales on thorax and elytra wide and forming a distinct brown and white pattern; punctation of thorax dense; front tibiae with only a faint trace of toothing before the apex, middle and probably also the hind tibiae in male (males not seen), with a distinct spur before the apex.

Head concealed from above by overhung anterior margin of prothorax, occiput with trace of ridging on either side, not entirely covered by scales but showing the alutaceous surface beneath; scales broad, curved, and not flatly appressed, between antennal sockets finer and transversely placed; labrum and antennae reddish brown. Antennal joints of the usual proportions. Prothorax approximately as long as wide with a convex projected anterior margin; a faint transverse depression behind eyes; sides 3-toothed, surface alutaceous with dense and not coarse, round punctures not entirely concealed by the broad brown and white curved scales, scales forming a pattern. Elytra more than twice as long as thorax, shining bronzy black beneath the broad brown and white scales; striate punctures coarse but not ridged, basal callosities not pronounced, a faint depression below; scales forming a pattern with the humeri and sides more or less white and a white spot near apex. Body beneath finely alutaceous but moderately shining, breast and first abdominal segment not coarsely punctate, with scattered fine white scales; front tibiae with a very obscure tooth before apex on the inner side and a more marked one at apex on outer edge; middle tibiae of female with a distinct spur before the apex, probably also one of the hind tibiae of male although no male examined. Length 4.3 to 4.8 mm.; width 1.8 to 2 mm.

*Type and paratypes.*—Type female in the Miguel Lillo Institute, Tucumán, Argentina, collected January 3, 1949, by Kuschel; one paratype, U.S.N.M. No. 59364; one paratype in the Museum of Comparative Zoology.

*Type locality.*—Almacea, Trinidad, Bolivia.

*Remarks.*—This species is very close to *M. spinipes* from Venezuela, having a similar structure, particularly in the spurs on the tibiae. This character is found up to this time in these two species only. The chief difference between the two species appears to be in the proportions of the body, in *M. calcariferus* the elytra are over twice as long as the thorax in the three females examined although the elytra are scarcely any wider than in *M. spinipes*. There are also slight differences in the color, the Bolivian species being black, the Venezuelan more frequently brownish, and in the punctation on the first segment of the abdomen, which in the Venezuelan species is coarser and denser.

## DISCUSSION OF MYOCHROUS ALBOVILLOSUS JACOBY

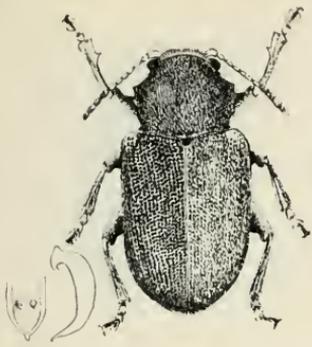
## PLATE 8, FIGURE 4

*Pachnephorus tessellatus* DUFTSCHMID, Fauna Austriaca, vol. 3, p. 217, 1825.  
*Myochrous albovillosus* JACOBY, Biologia Centrali-Americana, Coleoptera, vol. 6,  
pt. 1, p. 176, 1882.

*Myochrous albovillosus*, described by Jacoby from "Mexico," is really a species of *Pachnephorus* that occurs about the Mediterranean. There are two cotypes, one in the British Museum (in the Baly collection, collected by Pilate) and the other in the Museum of Comparative Zoology (in the Bowditch collection from Jacoby's collection). I compared a specimen of *Pachnephorus tessellatus* Duftschmid with the cotype in the Museum of Comparative Zoology and found them indistinguishable. The short antennae with the greatly thickened distal joints, the thorax without tothing, the abdomen with the very long first segment, the shallow emargination at the apex of the middle and hind tibiae, and the broad, bifid scales all place this species in *Pachnephorus* rather than in *Myochrous*. The detailed description of the Museum of Comparative Zoology cotype is as follows:

About 3.7 mm. in length, oblong oval, shining dark brown beneath with the dense, closely appressed, pale brown and white scales, the scales short, broad, bifid. Antennae barely reaching the base of the prothorax, the five distal joints much enlarged, and as wide as long. Prothorax cylindrical, as long as broad, with a small apical and basal tooth but no signs of lateral tothing, sides arcuate; disk without depressions except along the basal margin, smoothly covered by broad, pale scales, the scales in the center a little darker; punctation beneath apparently rather dense and fine. Elytra broader than prothorax, tapering at apex, rather convex, with prominent humeri, and covered by broad scales that form a pattern, white along the base and on humeri, and down the middle of each elytron two or more white spots, and another along the side; rows of striate punctures not contingent but well-spaced, and the punctures round. Body beneath more densely clad with narrower and longer scales, particularly along the sides of the abdomen, down the middle of the abdomen and on the upper underbody less scaly; first abdominal segment nearly half the length of abdomen; legs less densely scaly, not toothed; middle and hind tibiae with an emargination at apex; anterior tibiae without tothing.

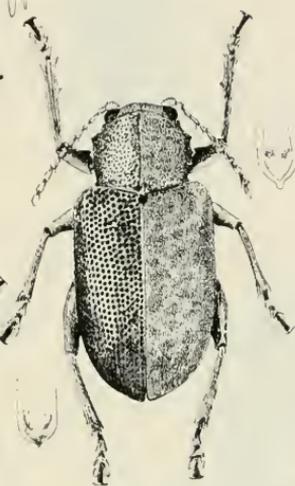
It seems likely that some mistake in locality labels may have been made, as none of the species of *Pachnephorus* is known to occur in the Western Hemisphere. *Pachnephorus tessellatus* is reported in Junk's Catalogue as occurring in middle and southern Europe, central Asia, and Mongolia.



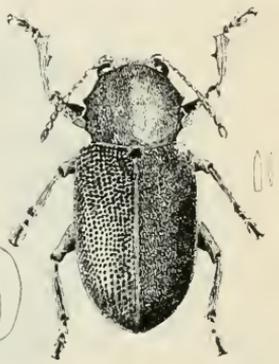
1. *Myochrous denticollis* (Say)



3. *M. rufus*



2. *M. longipes*



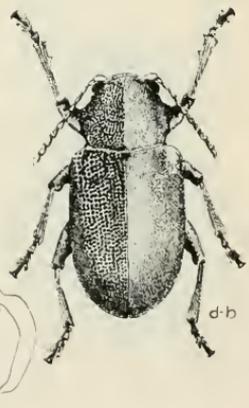
5. *M. austrinus*



4. *M. melancholicus* Jac



7. *M. carinatus* Jac.



8. *M. genuinus*



6. *M. platylongus*

SPECIES OF MYOCHROUS



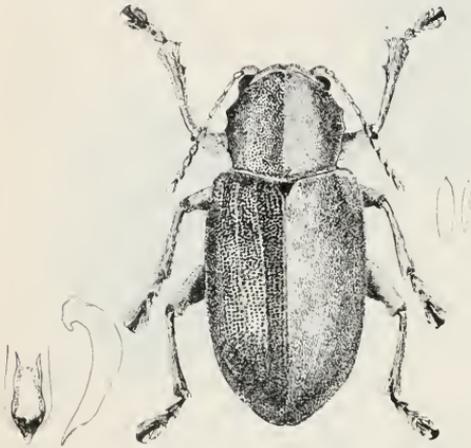
1. *M. squamosus* Lec.



2. *M. severini*



3. *M. intermedius*



4. *M. magnus* Schaeff.



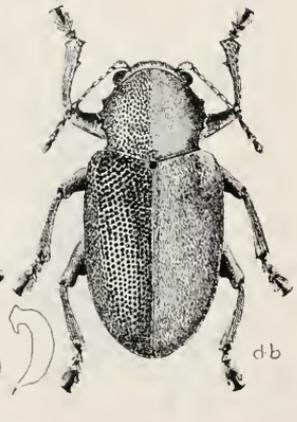
5. *M. pauxillus* Schaeff.



6. *M. floridanus* Schaeff.



7. *M. floridanus* subsp. *texanus*



8. *M. tibialis* Jac.

SPECIES OF MYOCHROUS



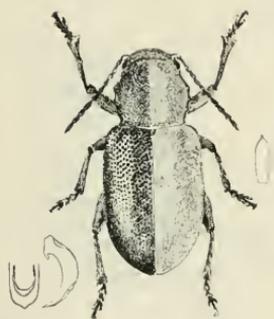
1. *M. runcella*



2. *M. latissiger*



3. *M. novallus* Johnson



4. *M. whitei*



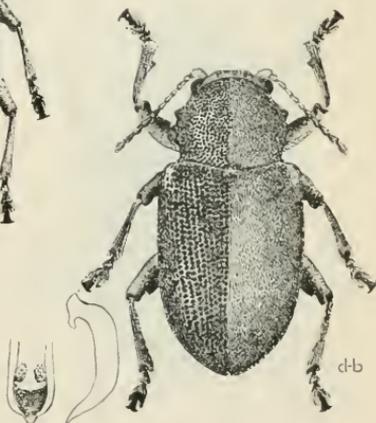
5. *M. longulus* Lcc.



6. *M. coenus*

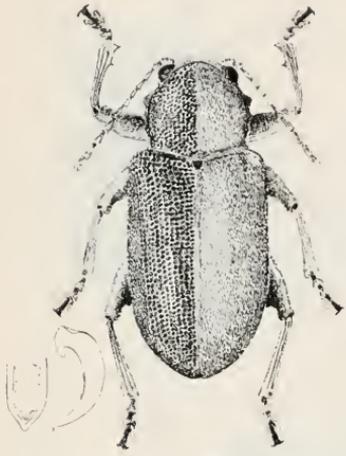


7. *M. barbadosis* Blake



8. *M. femoralis* Jac.

SPECIES OF MYOCHROUS



1. *M. normalis*



2. *M. rhabdotus*



3. *M. elachius*



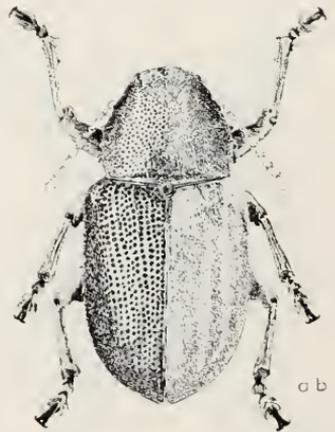
4. *M. paulus*



5. *M. nanus*

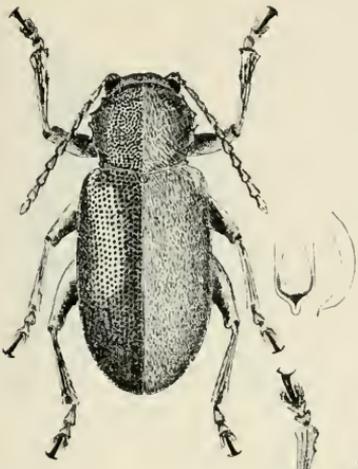


6. *M. bolivianus*

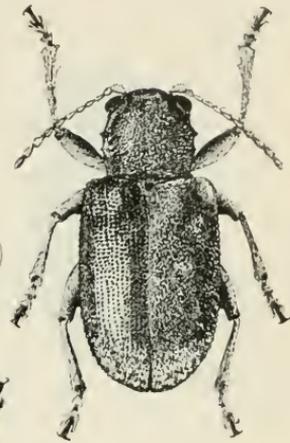


7. *M. clacocensis*

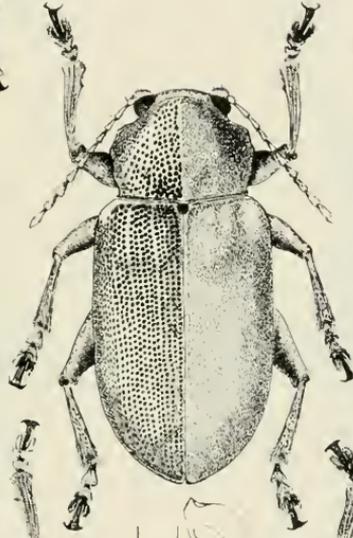
SPECIES OF MYOCHROUS



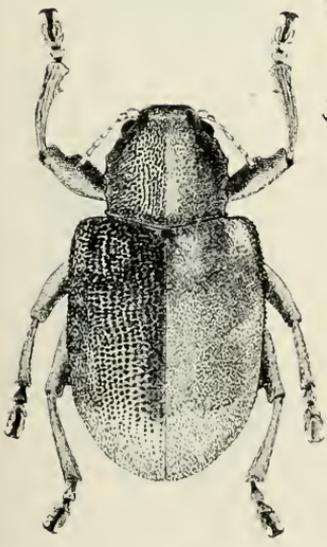
1. *Mimmundus Ericsson*



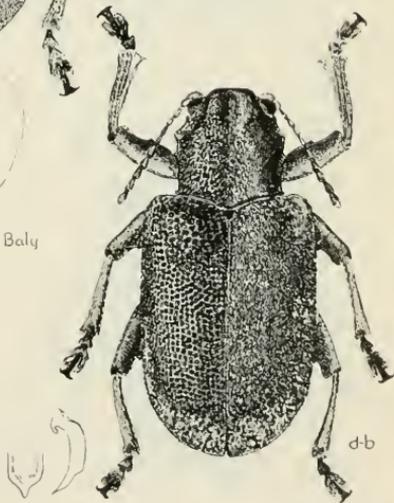
2. *M. quadrimaculatus*



3. *M. explanatus Baly*



4. *M. leucurus*

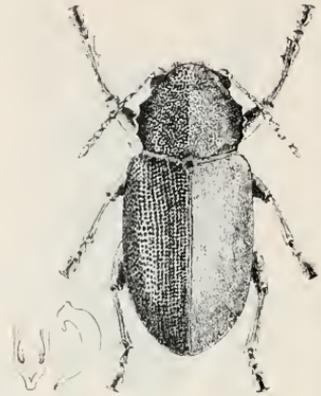


5. *M. curculionoides Lct.*

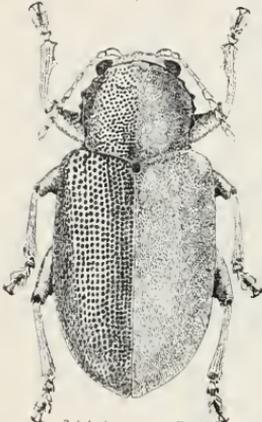
SPECIES OF MYOCHROUS



1 *M. biguttatus*



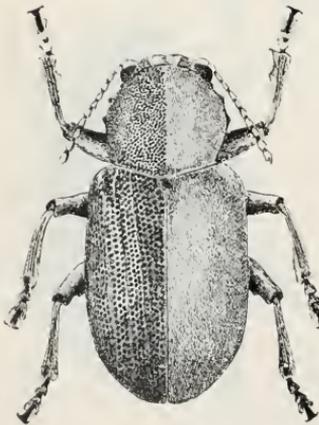
2 *M. saporogensis*



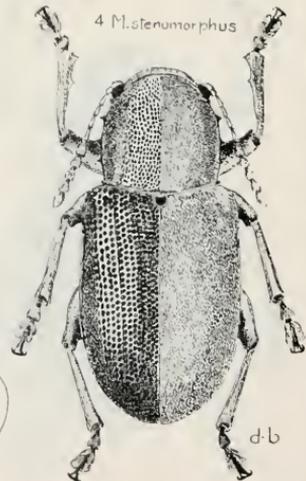
3 *M. fiqueroae* Breth



4 *M. stenomorphus*



5 *M. armatus* Baly



6 *M. monrosi*

d-b

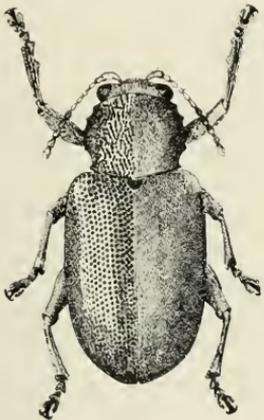
SPECIES OF MYOCHROUS



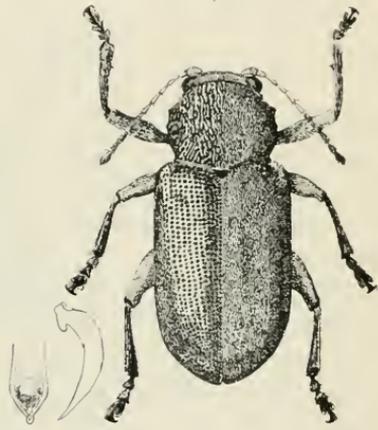
1. *M. portoricensis* Blake



2. *M. hispaniolae* Blake



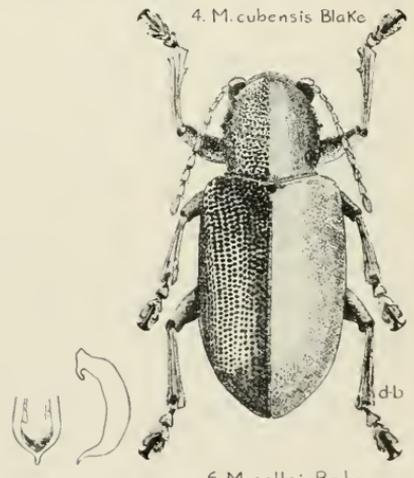
3. *M. jamaicensis* Blake



4. *M. cubensis* Blake



5. *M. brunneus*



6. *M. sallei* Baly

SPECIES OF MYOCHROUS



1 *Mecalcariferus*



2 *M. spangui*



3 *M. darlingtoni*



4 *Pachnophorus tessellatus* Duft  
(*M. albopilosus* Jac)



5 *M. mainoensis*

SPECIES OF MYOCHROUS