DORIS H. BLAKE

A Review of the Beetles of the Genus Metachroma Chevrolat (Coleoptera: Chrysomelidae)

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ABSTRACT

Blake, Doris H. A Review of the Beetles of the Genus *Metachroma* Chevrolat (Coleoptera: Chrysomelidae). *Smithsonian Contributions to Zoology,* 57:1–111. 1970.—A history of the genus *Metachroma* Chevrolat and a revision of the species in the Western Hemisphere are presented, with 47 new species described. The total number of species now known from the Caribbean islands is 68, contrasted with 65 species from North, Central, and South America. There are 34 species from the United States, 24 from Mexico and Central America, and only 7, so far, from South America. Drawings have been made of all the species, with emphasis on showing the different color forms that occur in most of the species—a phenomenon that has led to much confusion in the past.

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Introduction

On page 436 in the third edition of the Dejean catalog of 1837 is the first mention of the generic name *Metachroma* of Chevrolat with fifteen species listed under it. Of these species, fourteen are from America and one (the last species listed) is from Madagascar. *Metachroma quercata* (Fabricius), the species heading the list, had been previously described. There are three other previously described species in Chevrolat's list—*canella* (Fabricius), *aterrima* (Olivier), and *quadrinotata* (Say), all three of which LeConte, in defining the genus *Metachroma* in 1858, separated as a closely related group that he named the genus *Paria*. In the list is one other familiar (although not previously described) species, *Metachroma adusta* Klug, from Cuba. That name was given by Klug in his price list of duplicate insects in his Cuban collection, and it was used later by Gundlach in his Cuban collection; finally, the species was fully described under that name by Suffrian in 1866.

Chevrolat writes of his genus *Metachroma* in D'Orbigny's *Dictionnaire Universal d'Histoire Naturelle,* published in 1846. It is interesting to note his explanation of the Greek name: μετα, meaning "different" according to Chevrolat, and χρωμα, "color." In my Greek dictionary the preposition μετα is said in composition to express change. Thus, the name *Metachroma* is singularly appropriate because of the differences or changes in the color pattern within almost all of the species, a variability that naturally has led to a great deal of confusion and the description of many "new" species which are, in reality, only color forms of previously described species.

In Schultze's *Nomenclator Animalium Generum et Subgenerum,* published in 1926, the name "*Atrachela* pro *Metachroma* Dejean 1835" is given with the reference to a book by J. Gistel entitled *Naturgeschichte des Tierreiche für höhere Schulen,*" published in 1848.

LeConte, in 1858, gave the first description of the genus. He wrote:

> . . . the species to which I desire to restrict the name *Metachroma* are those congeneric with *Colaspis quercata* Fabricius, the first species mentioned in Dejean's Catalogue. They have the mouth free beneath, the thorax not lobed behind the eyes, which are large and prominent, the anterior coxae occupying nearly the whole of the prosternum, the antennae widely separated, slender, with joints 7–11 very slightly dilated and the second and third joints equal. The femora are moderately incrassated, scarcely perceptibly dentate, the posterior tibiae are externally obliquely emarginate near the tip and finally the ungues are acutely toothed or even bifid.

Except for two points, that "the femora are scarcely perceptibly dentate and the ungues are acutely toothed or even bifid," LeConte's characterization of *Metachroma* may still stand as adequate in separating *Metachroma* from related genera. LeConte did not have very many species before him when he drew up his description or he would have seen that many of the species do not have toothed femora while in others the femora sometimes are rather conspicuously toothed, and in at least three instances the claws appear simple.

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LeConte described three species: *Metachroma ustum, M. suturale* and *M. puncticollis.*

Suffrian, in his description of the chrysomelid beetles of Cuba in 1866, discussed LeConte's separation of *Metachroma* from *Paria* in some detail, and he described six species of *Metachroma* from Cuba, only one of which I can definitely recognize. This is not because Suffrian's descriptions are not detailed enough but because there are so many color variations in these small, closely related species that without examining them and dissecting them for the aedeagus one finds it impossible to make an accurate determination from almost any description based essentially on the coloring of the beetles.

Crotch, in 1873, was the third to describe new species under the genus and the first to make a short revision of the genus. He added nine new species as well as Say's *Colaspis pallida* and *Colaspis dubiosa.* Five of these new species, all from North Carolina, bore a Zimmermann manuscript name. Zimmermann, a German entomologist, spent the last 39 years of his life in the United States, part of the time teaching in the Carolinas. He collected wherever he went, and after his death, in 1867, Crotch bought his collection. Crotch designated *Metachroma quercatum* (Fabricius) as the type of the genus. It is a variably colored species, and Fabricius himself described two color forms, one entirely dark, the other with deep reddish brown elytral spots. As a result of these variations, two color forms have since been described as distinct species. Since *M. quercatum* is not very closely related to any other of the species, it cannot be considered as very typical of the genus.

Schwarz, in 1878, was the next to describe a species. *Metachroma maculipennis.* Although this name is a nomen nudum in the Dejean list, I can find no indication that Schwartz's species is the same. In 1885 that student of the Eumolpinae, Edouard Lefèvre, in his catalog of the eumolpids described the genus and listed all the species known at that time. In the meantime, Jacoby (1882, 1891) in the *Biologia Centrali-Americana,* described nine more species from Mexico and Central America. Horn followed in 1892 with a lengthy revision of the genus and four new species. Linell added a single species in 1898, and Schaeffer and Fall, more recently, have described new ones. Weise and G. E. Bryant have described species from Puerto Rico and Jamaica, respectively. In 1930 I began describing species of *Metachroma* from the West Indies, and in the years since have named over forty new ones from the Caribbean islands, as many again as had been previously known. Now I am attempting to treat the genus as a whole as it occurs in the Western Hemisphere from Ontario, Canada, to Mendoza, Argentina, as well as the Caribbean islands. Whether this genus extends across the Pacific to the Pacific islands I am not certain. I have examined a specimen from Hawaii and one from the Gilbert Islands, neither of which differs very much from the species in America. In both, the second and third antennal joints are equal (in the genus *Rhyparida,* a closely related oriental genus, the second joint is shorter as in *Paria*). I have two specimens labelled "Totana, Pr. Murcia Spain," a locality on the Mediterranean coast, which I doubt is correct since the genus is not known to occur in Europe. It is probably a Central American species, although possibly from South America.

As for the distribution of the species in the Western Hemisphere, by far the largest number for any particular section occurs in the West Indies, where each island has its own distinct species that do not occur on the other islands (except possibly the small adjoining ones). Many species, however, have closely related but slightly different relatives in the other islands. I have 21 species from Cuba, 8 from Puerto Rico, 15 from Haiti and the Dominican Republic, 19 from Jamaica, and 5 from various other islands, totaling 68 from this Caribbean region. In contrast, there are only 34 species from the United States, 24 from Mexico and Central America, and, so far, only 7 from South America, totaling 65 species from both North and South America. Of the United States species, at least five are common to both the United States and Mexico.

In the United States the preponderance of species is found along the eastern coast, particularly the southeastern coastal region, and from Texas across New Mexico and Arizona to southern California. There are only a few from the middle and northern states, none so far reported from Washington or Oregon, three from Idaho, of which one, *Metachroma angustulum* Crotch (which feeds on willow), is known along the northern border in Montana, Minnesota, and Ontario and is the farthest north of any species of the genus. Four species have been collected in Massachusetts, but none from farther north in the New England states.

The host plant is unknown in the majority of cases,

but in those of which we do have records, it would appear in most instances to be trees, and oak in particular. *Metachroma quercatum* (Fabricius) was undoubtedly named for its host, as there are records of it being taken on that tree. *Metachroma vicinum, M. maculipennis,* and *M. laevicollis* have been recorded on oak, *M. marginale* on pecan, *M. interruptum* on pecan, poplar, and apple, *M. angustulatum* on willow, and *M. orientale* on *Pinus taeda. Metachroma viticola* was so named by Linell because it was found injuring grape. *Metachroma californicum* throughout its wide range from western Texas to southern California, has been recorded on *Pluchea sericea,* a willow-like shrub that attains the height of some meters and grows along the water courses in these semi-arid states. Bryant has described a species from Jamaica as *Metachroma rosae,* which was taken on rose bushes. So it would appear that, in general, species of *Metachroma* live on the foliage of woody shrubs or trees.

Of the life history, I have been able to find only a single reference. Unlike its closely related genus, *Paria,* which is sometimes injurious to members of the rose family such as strawberry, raspberry, and apple, *Metachroma* beetles apparently have not inflicted sufficient damage from an economic standpoint to warrant any investigation into their life history. D. W. Coquillett, in a short note on *Metachroma pallidum* (Say) as determined by Horn, wrote that it was feeding on the leaves of poplar in colonies, the larvae entered the soil June 5, and beetles issued about June 19. Species of *Paria* also have been found on such trees as pine, willow, hazel, juniper, walnut, and oak, besides such herbaceous plants as strawberry, clover, golden-rod, and aster.

In his list in the Dejean catalog Chevrolat did not distinguish species of *Metachroma* from those that LeConte later placed in the genus *Paria.* In truth, there is little to separate them. LeConte found a difference in the relative length of the second and third antennal joints; in *Metachroma* they are of the same length, in *Paria* the second joint is shorter. More striking is the postorbital lobe on the prothorax that in *Paria* encircles the lower part of the face like a high collar; in *Metachroma* there is no such collar, and the lower part of the face is "free." In separating the two genera Suffrian stressed the toothed anterior angle in *Metachroma,* which is lacking in *Paria,* the sides being (as Suffrian wrote) more or less closely pressed together without the jutting-out anterior angles which he called the "eared" prothorax in *Metachroma.* In both genera the color pattern in many species varies within a species, from entirely pale yellow-brown through variously spotted or vittate markings to entirely dark brown or piceous. John A. Wilcox in his treatment of *Paria* has even reduced his descriptions of coloration of the species to a listing of color patterns by number. He illustrates 15 such color patterns. Many species of *Metachroma* show the same extreme variation in color patterns in a series of specimens from one locality, while in a few others for which so far as we have material there is only one color pattern. In only two species, both from the West Indies, is there a departure from the pale yellow-brown to piceous coloration; in these two there is a definite aeneous green lustre, more pronounced than in Horn's *M. aeneicollis.* Suffrian also writes of a "greenish shimmer" to the thorax in his *M. suturale.* At least one species, *M. interruptum* (Say), is apparently dimorphic; in the male the coloring is regularly pale, and in the female it is heavily and darkly marked. I have examined large series of *M. interruptum,* and all show this color difference in the sexes. Wilcox reports, on the other hand, that in *M. angustulum* Crotch the females are pale and the males are dark. There may be other species with similar dimorphism but, for the most part, too few specimens have been seen to make any positive determination of this.

While the genus *Paria* is probably the closest relative of *Metachroma* in the Western Hemisphere, *Rhyparida* from the Pacific islands, Australia, New Guinea, Borneo, and southern Asia also is very close. In this genus, as in *Paria,* the second antennal joint is shorter than the third. The legs and antennae are often longer. *Rhyparida* is likewise a large genus—166 species (described chiefly by Baly and Jacoby) are listed in Wilhelm Junk's catalog of 1914, and many more have been added by Gressitt and others. *Rhyparida,* like *Metachroma,* also shows great diversity of forms and of the aedeagus.

In *Metachroma* the head has a groove about the eyes that usually ends at the antennal socket. In one species, however, in the male this groove extends down to the transverse sulcus dividing the front from the clypeus, while in the female it ends as usual at the antennal socket. The eyes, which are conspicuously large, are emarginate on the inner side near the antennal sockets. There is often a linear depression from

the occiput down the front, or the remains of it as a depressed spot on the front. In certain groups there is a well-marked sulcus separating the front from the clypeus, the latter varying in shape from broadly rectangular to much narrower and even somewhat triangular. The anterior margin of this clypeus over the labrum is usually curved in a greater or less emargination, but it has all variations of this and may occasionally be straight over the labrum. The jaws are usually large and well developed. In one species there is such a development of jaw that I have named it *prognathus*. In a great many species there is no transverse sulcus separating front from clypeus, although the clypeus is almost always marked by an alutaceous and more coarsely punctate surface. The antennae extend well beyond the humeri in most species, varying from long and slender in the long species to having shorter joints with the distal ones somewhat thicker. The second joint is always as long or longer than the third, and the seventh joint is longer and thicker than the preceding ones and usually is a little longer than joints 8, 9, and 10. The prothorax is variable in proportions as well as in convexity. There is always a more or less conspicuous tooth at each angle, both anteriorly behind the eye and at base. The surface varies from very smooth, without depressions, to rugosely punctate, and in at least one species there is a hole-like depression on each side. The elytra have regular striae, a short stria at the scutellum, then five long striae ending in the one from the intrahumeral sulcus, and on the side there are four or five shorter striae, often somewhat confused. In a few cases the first of these lateral striae extends upward on the inside of the humerus, a good character in determining the species in which it occurs. These elytral striae vary greatly in distinctness and in being more or less impressed, with the intervals often costate. They may be reduced to mere remnants of striae along the suture and in the transverse depressed area near the base. Usually the striae are fainter towards the apex, but in some the punctures are distinct to the apex. The upper surface is glabrous in all but two species. (1) In *M. peninsulare* Crotch there is a very inconspicuous short pale hair from each puncture on the prothorax; it is difficult to see this except when viewed from the side. (2) In a new species from Mexico which I have named *hirsutum,* the whole upper surface is covered with a very fine pale pubescence that while not at all conspicuous is more easily detected than in *M. peninsulare.* On body beneath, the pubescence is more usual, especially on the femora and tibiae. In the emargination of the middle and hind tibiae is one of the primary characters in determining the genus. The claws have a basal tooth in most cases varying from being very short at the base to more than half the length of the claw. As in the case of the femora, sometimes with a tooth and occasionally with none, there are a few species (*M. longulum* Horn, *M. insulare* Fall, and *M. immaculatum,* new species) in which the claws are apparently simple. In the structure of the legs *Metachroma* resembles *Paria* again. In both there may or may not be a tooth on the femora. Often the tooth is so small that it is difficult to detect, but in a few species it is conspicuous. This development of the tooth, particularly on the front femora, occurs in several West Indian species, mostly in the narrow ones.

From the foregoing one can easily see that in the determination of species of *Metachroma* little dependence can be placed on the color pattern because of its variability within a single species. One must rely chiefly on morphological characters, often quite small ones, such as the presence or absence of the transverse sulcus separating the front from the clypeus, the presence or absence of a femoral tooth or the length of the claw tooth, or the depressions on the elytra. The punctation of the elytra is a good character, but the punctation of the prothorax may vary from fine to coarse in a single series from the same locality. In most cases the best character is in the aedeagus.

In the shape of the aedeagus, *Metachroma* is unlike *Paria* in the great majority of cases. It is unlike any eumolpid genus that I have studied in the remarkable variety in the shapes of the aedeagus. On the basis of this variation one could put the species in different genera, but there would be so many that it would only lead to confusion to do so. These differences in the shape of the aedeagus would appear to be only inward manifestations of the many outward shapes of the beetle. Probably the commonest and most universal form is that of the large, broadly oval species that have a wide aedeagus with a broad apex and short median tip, similar to that found in other eumolpid genera such as *Paria* and *Graphops.* Wilcox (1953) has illustrated the aedeagi of species of *Paria,* and I have illustrated the aedeagi of *Graphops* in my revision of that genus in 1955. In both these genera the aedeagus is similar and varies little in the different species. In *Metachroma* this type of aedeagus is found commonly in the broader, larger species, such as *M.*

ustum LeConte, *M. suturale* LeConte, *M. viticola* Linell, *M. interruptum* (Say), *M. peninsulare* Crotch, and others. Close relatives of *M. ustum,* which I would call the "*ustum*" group, occur from Texas through Mexico and Central America into South America, on the Galapagos Islands, and in the West Indies. But the narrower species of *Metachroma* not only are outwardly unlike but have very different aedeagi of diverse shapes. In the western United States there are groups of narrow species (of which *M. longulum* Horn and *M. californicum* Crotch are representatives) in which the aedeagi gradually narrow to the tip. In Texas another narrow species, *M. presidiense,* new species, has a still differently shaped but narrow-tipped aedeagus, and *M. texanum* Schaeffer has a uniquely different, sharply pointed tip to the aedeagus. There is a group of wider but tiny species (of which *M. testaceum* Blatchley is representative) that vary from having a two-pronged tip to the aedeagus to having the prongs more or less closely joined in a rounded tip. In the West Indies the narrow species are more prevalent and reach their most extreme form in Cuba and Jamaica, with such species as *M. gracile Blake* and *M. prognathus* Blake, the latter having a short, broad, straight aedeagus. On the other hand, *M. chapini* Blake, another narrow species from Jamaica, has a long, narrow, straight aedeagus. Of the 19 species known from Jamaica, 13 species are of an elongate narrow shape with variously shaped aedeagi, and only one of the narrow shape, *M. rugosum* Blake, has an aedeagus broad at the tip. Nearly all of these elongate West Indian species have a rather flat prothorax with a straight basal margin, and in several, as in the Cuban *M. odontotum,* new species, there is a large, conspicuous tooth on the front femora. *Metachroma mendozae,* new species, from the farthest south in central Argentina, is an odd-looking species having a large, wide head with widely separated eyes. Although of such unusual appearance for the genus, the aedeagus is not very different from that of *M. ustum* LeConte, being broad with a tip like that of many eumolpid beetles. The aedeagus of *Metachroma quercatum* (Fabricius), the type of the genus, with a cleft and pointed tip, is unlike any of them.

Though future revisionists may consider breaking up both *Rhyparida* and *Metachroma* into many genera, possibly on the basis of their different shapes, I do not consider this practical or desirable, and prefer to recognize the relatively few natural groups within the genus. By far the greater number of species are so different they cannot be put in any group. With all these differences in size and shape, there are few clearly marked characters beyond the simple ones laid down by LeConte and other early entomologists to separate these species into genera.

I have been fortunate in having so many collections loaned to me from all over the United States, Canada, and Europe. I wish to thank the following for sending me material for study: R. D. Pope and R. T. Thompson, who have sent me even the unique types from the British Museum (Natural History) (BMNH); Gerhard Scherer, G. Frey Museum at Tutzing, Germany; T. H. Farr, Science Museum, Institute of Jamaica; Dr. and Mrs. H. F. Howden, Canadian National Collection (CNC); P. J. Darlington, Jr., Museum of Comparative Zoology (MCZ); John C. Pallister, American Museum of Natural History (AMNH); Charles Triplehorn, Ohio State University (OSU); George Byers, University of Kansas (UK); Floyd Werner, University of Arizona (UA); Milton Sanderson, Illinois Natural History Survey; W. F. Barr, University of Idaho (UI); Hugh B. Leech, California Academy of Sciences (CAS); N.L. Downie of Lafayette, Indiana.

Key to Species from Eastern and Central United States

1.	Small, 2.5–3.5 mm in length	2
	Larger, 3.5–7 mm in length	7
2.	Elytra less than three times as long as prothorax, shining deep reddish brown or piceous	***M. longicollis aeneicollis*** Horn
	Elytra three times (or more) longer than prothorax, yellowish or reddish brown	3
3.	Prothorax smooth, nearly impunctate	***M. laevicollis*** Crotch
	Prothorax punctate	4
4.	Head and prothorax deep reddish brown	5
	Head and prothorax pale yellowish brown	6
5.	Prothorax sparsely punctate	***M. pellucidum*** Crotch
	Prothorax densely punctate	***M. testaceum*** Blatchley
6.	Elytra usually with large triangular dark area on side; 3–3.5 mm	***M. laterale*** Crotch
	Elytra entirely pale, without dark spot; 2.5–3 mm	***M. anaemicum*** Fall

7. Prothorax with dense elongate strigose punctures ..... ***M. quercatum*** (Fabricius)
   Prothorax without strigose punctures 8
8. Prothorax with four small spots across it ..... ***M. carolinense*** new species
   Prothorax without spots, sometimes with large dark areas 9
9. Lateral striate punctures continuing up on inner side of humeri 10
   Lateral striate punctures not continuing up on inner side of humeri 11
10. Narrowly elongate, with strong elytral costae ..... ***M. angustulum*** Crotch
    Broadly oblong oval, without strong elytral costae ..... ***M. interruptum*** (Say)
11. Aedeagus narrowing gradually to apex 12
    Aedeagus broad at apex 13
12. Elytra three times as long as prothorax and usually dark on side ..... ***M. luridum*** (Olivier)
    Elytra only slightly more than twice as long as prothorax and entirely yellowish brown ***M. texanum*** Schaeffer
13. Prothorax dull alutaceous pale yellow-brown ..... ***M. floridanum*** Crotch
    Prothorax not dull alutaceous but more or less shiny 14
14. Prothorax distinctly and densely punctate 15
    Prothorax either mirror-smooth or very finely and inconpicuously punctate 18
15. Prothorax finely and densely punctate, elytra without spots 16
    Prothorax densely and coarsely punctate, elytra often with spots 17
16. Prothorax approximately twice as wide as long, elytra with pale margin ***M. orientale***, new species
    Prothorax not twice as wide as long, elytra often with margin dark ..... ***M. marginale*** Crotch
17. Elytra densely and coarsely striate punctate, with punctures distinct to apex and intervals tending to be somewhat costate ..... ***M. magnipunctatum***, new species
    Elytra not densely striate punctate, punctures fading at apex and intervals not costate ***M. maculipennis*** Schwarz
18. Elytra convex, without intrahumeral sulcus or depression below ..... ***M. viticola*** Linell
    Elytra with well-marked intrahumeral sulcus and depression below basal umbones 19
19. Small (3.5–4.8 mm); elytra three times as long as prothorax ..... ***M. pallidum*** (Say)
    Large (4.8–7 mm); elytra not three times as long as prothorax 20
20. Head, prothorax, and elytra (except at apex) dark piceous ..... ***M. adustum terminale*** Horn
    Head and prothorax reddish brown; elytra usually paler yellow-brown, sometimes with median dark area ..... ***M. ustum*** LeConte

Metachroma laevicollis Crotch

FIGURES 1, 2

Metachroma laevicolle Crotch, 1873, p. 43.—Horn, 1892, p. 217.

DESCRIPTION.—From 3.0 to 3.5 mm in length, oblong oval, lustrous, either pale yellow-brown or piceous, legs always pale, prothorax not very convex but disc evenly rounded all over and with rounded sides, often mirror-smooth, at most with very fine punctures, elytra with fine, well-spaced striate punctures nearly obsolete over basal callosities and in apical half.

Head with interocular space half width of head, indistinctly and sparsely punctate, sometimes with a short median depression, no transverse sulcus separating clypeus; clypeus not so shiny, somewhat alutaceous and usually a bit more distinctly punctate. Antennae pale in pale specimens, in dark specimens with apical joints deeper brown, slender, extending below humeri. Prothorax not a third wider than long, not very convex, with slightly rounded sides, almost impunctate in most specimens, very finely punctate in some. Scutellum polished. Elytra with intrahumeral sulcus and a transverse depression below basal callosities, striate punctures along base deeply impressed so as to form puckers along base, but nearly obsolete over basal callosities and also in apical half, punctures not closely set and striae on sides short. Color varying from pale to piceous, sometimes suture dark, varying in degree. Body beneath varying from paler yellow-brown to piceous, legs always pale. Claws with long tooth. Length, 3–3.5 mm; width, 1.5–1.8 mm.

TYPE.—In LeConte collection, MCZ.

TYPE-LOCALITY.—North Carolina.

OTHER LOCALITIES.—*Massachusetts:* Sherborn, C. A. Frost; Holliston, Chicopee, Mount Tom, Springfield, all collected by F. Knab. *New York:* Central Park, Long Island, Charles Schaeffer. *New Jersey:* Da Costa, H. W. Wenzel; Egg Harbor, Cape May, H. A. Wenzel; Phillipsburg, J. W. Green. *Pennsylvania:* Easton, J. W. Green. *Maryland:* Greenbelt, on pin oak,

G. N. Nelson. *Virginia:* Barcroft, J. C. Bridwell; Hampton, N. M. Downie. *North Carolina:* Walnut Hill, L. D. Tuthill; Black Mountains, Van Dyke. *Georgia:* Okefenokee Swamp, H. W. Crowder; Prattsburg, L. D. Tuthill. *Florida:* Suwanee Springs, Zolfo Springs, L. B. Lawson; Jacksonville, R. L. Plickle. *Mississippi:* Meridian, R. H. Beamer, Paul Oman. *Louisiana:* Mandeville, H. Soltau.

REMARKS.—This eastern coastal species described by Crotch with a Zimmermann manuscript name, is similar in many ways to *M. pallidum* (Say) from the midwest. In comparing the Crotch type of *M. laevicollis* with the specimen labelled *M. pallida dubiosa* (Say) in the LeConte collection, the specimens of *M. laevicollis* are smaller, the prothorax is not so convex in the middle but flatter and evenly rounded all over, and the elytral punctation is not so distinct and dense but is more widely spaced and vanishes entirely at the apex. In the midwestern species there are distinct traces of striate punctures at the apex. Large series of *M. laevicollis* from Phillipsburg, New Jersey, contain both pale and piceous forms, and specimens from Mount Tom, Massachusetts, have intermediate forms with sutural darkening of varying widths. One character that makes this eastern species recognizable is the puckering along the base of the elytra due to the impressed punctures there, whereas elsewhere the striate punctures are not at all impressed but superficial.

Metachroma marginale Crotch

FIGURES 3, 6

Metachroma marginale Crotch, 1873, p. 43.—Horn, 1892, pp. 220, 221.

DESCRIPTION.—Between 4.0 and 5.0 mm in length, elongate oblong oval, somewhat shiny, pale yellow-brown with prothorax a deeper yellow and often but not always margin of prothorax and elytra piceous, prosternum and metasternum often deep brown or even piceous, prothorax flat, densely punctate, elytra with regular, closely set, small, striate punctures, at apex becoming indistinct.

Head with interocular space half width of head, coarsely punctate throughout and more so on clypeus, a well marked transverse sulcus separating clypeus from front and usually a median depressed line down front; yellow-brown, sometimes occiput dark, jaws dark. Antennae extending below humeri, yellow-brown with apical joints frequently deeper brown. Prothorax not twice as wide as long, with widely rounded sides, not very convex and faintly depressed over head, surface densely covered with small but deep punctures, yellow-brown often with margins dark. Scutellum usually deep reddish brown. Elytra more than three times as long as prothorax and considerably wider, with striate punctures closely set and regular, becoming rather faint at apex but with distinct rows along side, a faint transverse depression below basal umbone; shining pale yellow-brown, often with dark margin. Body beneath often with deep reddish brown to piceous prosternum and metasternum, abdomen usually paler, legs pale. Femora not toothed, claws with short basal tooth. Length 4.2–5.2 mm; width, 2–2.5 mm.

TYPE.—In LeConte collection, MCZ, with light green label, indicating "Kansas, westwards." The name label is followed by "Zimmer," indicating it is a Zimmerman manuscript name. There is a second specimen from Enterprise, Florida.

TYPE-LOCALITY.—"N. C. and Kansas."

OTHER LOCALITIES.—*Texas:* Karnack, D. J. and J. N. Knull; Leon County, D. J. and J. N. Knull. *Louisiana:* Leesville, J. Robinson. *Alabama:* Robertsdale, destroying new growth of pecan trees, C. A. Reed; Wadley, H. H. Smith. *Florida:* Molino, S. S. Harvey; Faye, on pecan; Dunedin; Tampa, Hubbard and Schwarz; Jacksonville, Ashmead; *Georgia:* St. Catherine Island, Hubbard and Schwarz; *South Carolina:* Florence, V. M. Kirk, 25 May 1953. *North Carolina:* Raleigh, H. F. and A. Howden.

REMARKS.—The type described by Crotch with the Zimmermann manuscript name, in the LeConte collection, is pale and entirely without a "pitchy" margin, as Crotch described it, and its green label indicates Kansas. There is no specimen from North Carolina as mentioned by Crotch, but there is a specimen in the United States National Museum of Natural History (USNM) from Florence, South Carolina, that has dark margins. There is another specimen from Florence (but not taken on the same date) that is *M. orientale,* new species, which is the species so easily confused with *M. marginale.* In a series from Robertsdale, Alabama, some specimens have dark margins and others are entirely pale. Except for this little variation the species is fairly constant in its coloring. Horn evidently was not familiar with *M. marginale,* since he simply copied Crotch's description with the remark

that possibly it is "merely a larger *luridum*." The only certain way of distinguishing *M. marginale* from *M. orientale* is by comparing the aedeagi.

Metachroma orientale, new species

FIGURES 4, 5

Metachroma pallidum Crotch (not Say), 1873, p. 43.—Horn, 1892, pp. 211, 219.

DESCRIPTION.—Between 3.5 and 4.7 mm in length, oblong oval, shining, pale yellow-brown with head and prothorax usually a deeper yellowish or reddish brown: prothorax nearly twice as wide as long, broad and rather flat, densely and distinctly but not coarsely punctate; striate punctures on elytra shallow, fading at apex; aedeagus tending to be dark brown or piceous.

Head with interocular space approximately half width of head, occiput broadly rounded, polished, usually very finely punctate, a well-marked transverse sulcus dividing front from clypeus and a small median frontal depression, yellow-brown with jaws tending to be darker reddish brown. Antennae slender, extending below humeri, yellow-brown. Prothorax nearly as wide as elytra, with well-rounded sides and small tooth at each angle, basal margin straight, disc rather flat with a slight depression over head, surface with very dense, distinct but not coarse punctures, deep yellowish or reddish brown. Scutellum deep yellow-brown. Elytra three times as long as prothorax, convex, with few depressions, only a short intrahumeral sulcus, and a faint depression below it, rows of punctures not deeply impressed but superficial and fine, becoming fainter at apex, shining yellowish-brown. Body beneath rather variable in color, usually deeper than upper surface, occasionally abdomen piceous; legs pale. Femora not toothed, claws with short basal tooth. Length, 3.5–4.7 mm; width 1.7–2.2 mm.

TYPE.—In LeConte collection, MCZ, with two paratypes. Labeled by Crotch as *M. pallidum* (Say).

TYPE-LOCALITY.—North Carolina.

OTHER LOCALITIES.—*Massachusetts:* Lowell, Tyngsboro, Chatham, Mount Tom, Springfield, F. Knab; *New York:* Central Park, Long Island, Charles Schaeffer. *New Jersey:* Egg Harbor, Da Costa; Linwood, J. W. Green. *Maryland:* Baltimore, F. E. Blaisdell; Piney Point, Hubbard and Schwarz. *Virginia:* Hampton, N. M. Downie. *North Carolina:* Durham, on *Pinus taeda*, V. M. Kirk. *South Carolina:* Florence, 20 July, 1953, V. M. Kirk. *Florida:* "Florida," A. Bolten.

REMARKS.—The three specimens in the LeConte collection labeled "*M. pallidum* (Say)" by Crotch have been the basis for this species being determined, ever since, as *Colaspis pallida* Say, although neither Say's description nor the type-locality fits them. Say described *Colaspis pallida* as having the thorax "with punctures small, sometimes obsolete," and for the type-locality he wrote "it inhabits Missouri." This species is found only in the east, from Massachusetts to Florida. The prothorax is very densely and distinctly punctate with the punctures never obsolete. H. S. Barber has written on specimens: "this is not *pallidum*." Apparently because of Crotch's early error, this species has gone undescribed. Another factor that may have contributed to its being unrecognized as new is its close relationship to *Metachroma marginale* Crotch. In many instances, in the paler specimens of *M. marginale* Crotch I cannot be certain which species it is unless I dissect a male. In its typical form, as Crotch described it, the margins of *M. marginale* are piceous, but this is not so in the paler specimens, which are so similar to *M. orientale* as to be almost indistinguishable. In general, the prothorax is not so broad, but is smaller and more elliptical and the basal margin not straight, and the elytral punctation is more impressed in *M. marginale*. The aedeagus of *M. orientale* has the apex more rounded and is usually dark brown or piceous.

Metachroma pallidum (Say)

FIGURES 7, 8

Colaspis pallida Say, 1823, p. 446.
Colaspis dubiosa Say, 1823, p. 447.
Metachroma dubiosum (Say).—Horn, 1892, pp. 212, 213.

DESCRIPTION.—Say's description of *Colaspis pallida* is as follows:

Pale rufous, elytra pale testaceous, immaculate. Inhabits Missouri. Body very pale rufous; head obsoletely punctured, an indented abbreviated line or spot on vertex; thorax with puntures small, sometimes obsolete; elytra pale testaceous with striae of punctures which become obsolete before the tip. Beneath pale. L. 3/20 of an inch. Very similar to *C. notata* but is always destitute of spots on the elytra.

His description of *Colaspis dubiosa* is as follows:

Pale rufous, elytra testaceous with a black suture dilated at base. Inhabits Arkansa. This species seems to differ from the preceding only by having a black suture dilated at base, a

black lateral edge on the anterior half, sometimes obsolete, and a black basal ventral segment; the thorax is sometimes obsoletely dotted with black, and in one specimen is a small black spot anterior to the middle of each elytron; *6-notata, 4-notata, pallida,* and *dubiosa* may possibly prove to be the same species exhibiting remarkably distinct variations in the distribution of its colours. Found near the Rocky Mts. I think it possible that *dubiosa* may prove to be a variety of *Cryptocephalus canellus* Fabr.

In the LeConte collection the label on the first specimen of a series of beetles (apparently all the same species) is *M. pallida dubiosa* (Say), which would seem to indicate that LeConte regarded *dubiosa* as only a color form of *M. pallidum*. There are eleven specimens following the one bearing the label, which is an entirely pale yellow-brown beetle with a light green disc label. There are five specimens with green disc labels (indicating Kansas, Nebraska, etc.) five specimens with light blue labels (Lake Superior), and one specimen with a pink label (Middle States). In the second specimen the elytra have a piceous sutural darkening such as Say described in *dubiosa*. The third specimen, like the first, has the elytra entirely pale yellow-brown. The fourth specimen has a thorax with a dark spot on either side and the elytra with a dark sutural vitta. The remaining specimens have the sutural darkening varying in width and the prothorax varying from having dark spots to being entirely piceous. The sculpture is similar in all the specimens. The head is nearly impunctate, yellow-brown with dark brown jaws; there is no transverse sulcus dividing front from clypeus, but there is a small median frontal depression in some specimens; the interocular space is about half width of head. The thorax is moderately convex with rounded sides, very finely and sparsely punctate; the elytra have fine striate punctures fading at apex but well-marked on the sides. The body beneath, legs, and antennae are all pale. Femora not toothed, claws with long tooth. Length, 3.8–4.4 mm; width, 1.9–2.2 mm.

REMARKS.—Crotch's interpretation of *Colaspis pallida* is quite different from that of LeConte, as shown by the three specimens in the LeConte collection from North Carolina which I believe Crotch has labeled and which correspond with Crotch's description of *pallidum* in having a densely punctate prothorax. I think that these three specimens labeled *pallidum* are responsible for the confusion of all subsequent entomologists from Horn to Fall. These three specimens in reality represent an eastern species that occurs from Massachusetts southwards to Florida but does not occur in the midwest. Because of Crotch's determination of this species as *M. pallidum* it has remained a species that has never been described. As for *M. dubiosum* (Say), Crotch has described a species that LeConte recognized as new and described as *M. suturale*. In the LeConte collection Crotch has put his label "*M. dubiosum*" below LeConte's "*M. suturale* Lec." As in the case of Crotch's *pallidum* from North Carolina, Crotch gives the locality of *M. dubiosum* as "Atlantic region, Texas." All this in spite of Say's locality from the midwest.

Whether LeConte ever saw Say's specimens is problematical, but his interpretation of Say's descriptions in this instance is better than that of either Crotch or Horn, and I believe it should be followed. His long series of specimens of varying degrees of dark coloring following the pale specimen he labeled *pallida dubiosa* Say is sufficient to show that color alone—which was Say's sole way of distinguishing *dubiosa* from *pallida*—does not hold. Like so many other species of the genus, this one is variable in coloring.

DISTRIBUTION.—*Kansas:* Sheridan County, at 2,500 feet, S. J. Hunter; Stafford County, D. B. Lindsay; Garden City, H. W. Menke; Decatur County, at 2,560 feet, S. J. Hunter; Hamilton County, F. H. Snow; Clark County, F. H. Snow. *Arkansas. Nebraska:* Superior. *Dakota. Kentucky:* Benton, R. H. Beamer; *Tennessee:* Burrville, B. Benish. *Illinois:* Valmeyer, M. W. Sanderson.

Metachroma carolinense, new species

FIGURE 9

DESCRIPTION.—About 4.3 mm in length, elongate oblong oval, shining, head and prothorax reddish brown, elytra, legs, and undersurface pale yellow-brown; four small dark spots across pronotum, deep brown sutural edges widened below scutellum with a median spot on each elytron opposite and another submarginal one in same line, also another median spot near apex, on first abdominal segment a median dark area, pronotum finely punctate, elytra with fine striate punctures vanishing at apex.

Head with interocular space half width of head, finely punctate over occiput and deep reddish brown, paler on front, jaws piceous, a median frontal depression but no sulcus dividing front from clypeus, clypeus with sparse, fine punctures, anterior margin over labrum widely and shallowly emarginate. Antennae

pale yellow brown. Prothorax about a third as long as elytra and not as wide, moderately convex with rounded sides and small tooth at each angle, somewhat alutaceous and finely and densely punctate with a median linear impunctate area; four deeper brown, rather small spots across disc. Scutellum pale with piceous edging. Elytra with prominent humeri, a deep intrahumeral sulcus and transverse depression below basal umbones, punctures near base deeply impressed forming short costae of intervals, but over umbones punctures fine and not impressed, in transverse depression they become enlarged, gradually diminishing so at apex they vanish; pale yellow brown with deep reddish brown sutural edges, this darker color widening below scutellum at transverse depression, and a dark median spot opposite the widening on each side, and a trace of a dark spot on margin in same row, another median spot near apex of each elytron. Body beneath and legs pale but deepening to reddish brown over prosternum and metasternum and middle of first abdominal segment. Femora with minute tooth. Claws with long tooth. Length, 4.3 mm; width, 2.2 mm.

TYPE.—Female, USNM 70685.

TYPE-LOCALITY.—Eighteen miles north of Charleston, South Carolina (E. A. Chapin, collector).

REMARKS.—Only one specimen, a female, is known. This is the only eastern species of *Metachroma* north of Mexico with a four-spotted pronotum. There are four Mexican species (one of which extends into Arizona) with four spots on the pronotum, but all have a larger prothorax and usually have a dark occipital spot. Also, there is no other eastern species with similar markings on the elytra. In fact, this does not appear to be at all closely related to any other eastern species. A male specimen is greatly needed to help place this species in a group.

Metachroma luridum (Olivier)

FIGURES 10, 10a

Colaspis lurida Olivier, 1808, p. 892.
Metachroma vicinum Crotch, 1873, p. 45.
Metachroma luridum Horn, 1892, pp. 217, 218.

DESCRIPTION.—Between 3.5 and 4.0 mm in length, oblong oval, shining, yellow-brown with dark occiput, often dark prothorax, and elytra having a lateral or marginal darkening, sometimes beetle entirely pale yellow brown; prothorax densely punctate, elytra with striate punctures fine and fading at apex.

Head with interocular space a little less than half width of head, usually dark on occiput, yellow or reddish brown on front, coarsely and densely punctate, a slight transverse sulcus between front and clypeus, often a small median depression on front. Antennae extending below humeri, yellowish brown. Prothorax not quite twice as broad as long, rather flat, with rounded sides and tooth at each angle, densely and distinctly punctate, usually deep reddish brown to piceous, with paler area about edges, sometimes only sides dark or sometimes entirely pale. Scutellum deeper brown. Elytra three times as long as prothorax and wider, striate punctation fading after middle so apex is often entirely smooth, little evidence of transverse depression or basal umbones; yellowish brown usually with a reddish brown or piceous lateral darkening, sometimes only margin dark, sometimes sutural edges also dark, but rarely whole disc dark, occasionally entirely pale. Body beneath varying in color from pale yellow-brown to piceous, legs always pale. Claws with long basal tooth. Length 3.5–4.2 mm; width, 1.7–2.2 mm.

TYPE.—The whereabouts of *Colaspis lurida* Olivier is not known. The type of *M. vicinum* is in the LeConte collection, MCZ.

TYPE-LOCALITY.—"Caroline" (*Colaspis lurida*); South Carolina (*Metachroma vicinum*).

OTHER LOCALITIES.—*New Jersey:* Lakehurst, Da Costa, H. W. Wenzel: *Virginia:* Fort Monroe, Hubbard and Schwarz. *North Carolina:* Chadbourne, feeding on oak, E. G. Smythe; Raleigh, H. F. Howden. *Georgia:* Tifton, Schaeffer; 8 miles south of Waycross, E. S. Ross; Emory University Field Station, Newton. *Florida:* Dunedin, W. S. Blatchley; Jacksonville, Ashmead; Gainesville, S. Rogers; Tampa, Hubbard and Schwarz; Archer, four miles north of High Springs, Howden and Dozier. *Louisiana:* Covington, Soltau; Mandeville, Soltau; Hammond. *Texas:* Tyler, S. E. Bennett; Bastrop, J. O. Martin. *Alabama:* Oak Grove, H. Soltau. *Mississippi:* "Southern Mississippi," Soltau.

REMARKS.—The type-specimen described by Crotch with the Zimmermann manuscript name *Metachroma vicinum* is in the LeConte collection, MCZ. Horn, recognizing this as Olivier's *Colaspis lurida,* wrote that the figure in Olivier's *Entomologie* was very good and that it seemed to him remarkable it had not been identified earlier. As in so many species of *Metachroma* there is considerable variation in coloring, some specimens being entirely without dark markings or with

only a faint darkening of the margin, and these last are difficult to distinguish from *M. marginale* Crotch, which is generally a little larger and not so flat as *M. luridum,* and with only the margin dark. The aedeagus is quite different. This species extends from New Jersey along the coast to Texas. It is approximately the same size as *M. quercatum* Fabricius, and, like that species, has been taken on oak. It belongs in the group composed of small yellow-brown species with the head having a transverse sulcus across the front, the prothorax being rather flat and densely punctate, and resembling *M. anaemicum* Fall, *M. marginale* Crotch, and *M. laterale* Crotch, but the aedeagus is quite unlike any of these, having a tapering narrowed apex instead of a broadly rounded one.

Metachroma laterale Crotch

FIGURES 11, 12

Metachroma laterale Crotch, 1873, p. 44.—Horn. 1892, p. 219.

DESCRIPTION.—From 3.0 to 3.5 mm in length, elongate oblong oval, shining yellowish brown, each elytron with a more or less conspicuous reddish brown lateral blotch along the middle extending from the margin inwards but not reaching suture; prothorax rather flat, densely punctate, elytra with punctures becoming faint in apical half.

Head with interocular space a little more than half width of head, occiput rounded, nearly impunctate, a transverse sulcus dividing front from clypeus, clypeus with a very few punctures, yellow-brown, only jaws dark. Antennae extending below humeri, pale. Prothorax not twice as broad as long, rather flat with well-rounded sides, a depression over head, surface densely and distinctly punctate except along base, entirely pale yellowish brown. Scutellum pale. Elytra about three times as long as prothorax, with striate punctures regularly spaced and fairly large but disappearing at apex and not very conspicuous over basal umbone; a depression below umbone; yellow-brown with a large triangular reddish brown area on the side of each elytron extending towards middle, this area very faint in some specimens. Body beneath with breast and sometimes abdomen a little darker, rest pale yellow-brown. Femora not toothed; claws with long tooth. Length, 3–3.5 mm; width, 1.5–1.7 mm.

TYPE.—In LeConte collection, MCZ, with four other specimens all with green disc label (signifying Kansas westward).

TYPE-LOCALITY.—"North Carolina, Kansas."

OTHER LOCALITIES.—*Virginia:* Aquia Creek. *Tennessee:* Burrville, Howden collection.

REMARKS.—The type and four specimens described by Crotch with the Zimmerman manuscript name in the LeConte collection have such faded faint lateral elytral markings that I failed to see them on first examination of the type-specimens. Only later, when I discovered a single specimen from the E. A. Popenoe collection labeled "LeConte det. 6763," did I recognize the species as fulfilling Crotch's description of *M. laterale.* I have seen four specimens from Aquia Creek, Virginia—two in the Ohio State University collection and two of the same series in Fall's collection. Howden collected a specimen from Burrville, Tennessee, that is in the Canadian National collection, and there are two specimens in MCZ—one labeled "Tenn." and the other "N.C." The beetle closely resembles *M. anaemicum* Fall from Georgia and Florida in shape and punctation as well as in the pale yellow coloring, but it is larger and has the elytra longer and the aedeagus quite different.

Metachroma quercatum (Fabricius)

FIGURES 13–15, 18

Colaspis quercata Fabricius, 1801, p. 417.—Olivier, 1808, p. 891.

Metachroma quercatum LeConte, 1858, p. 58.—Crotch, 1873, p. 42.—Horn, 1892, pp. 211, 220.

Metachroma puncticolle LeConte, 1858, p. 85.—Horn, 1892, pp. 219, 220.

Metachroma strigicolle Blatchley, 1924, p. 169.

DESCRIPTION.—Between 3.0 and 4.0 mm in length, oblong oval, somewhat shiny although many specimens are distinctly alutaceous, pronotum with strigose punctation, elytra finely striate punctate with punctures often somewhat irregularly placed, varying in color from entirely yellow or reddish brown to piceous, often pronotum piceous and elytra with median disc or suture piceous, or even humeri and apex reddish brown, rest dark, legs varying from yellow-brown to piceous.

Head with interocular space approximately half width of head, occiput usually piceous, finely punctate, sometimes a faint trace of median line on front, clypeus becoming paler, not deeply set off by transverse groove, more coarsely punctate, alutaceous, anterior margin

shallowly emarginate over labrum, mouthparts usually paler yellow-brown. Antennae extending below humerus, pale yellow-brown, sometimes with darker apical joints. Prothorax rather flat, with well-rounded sides and small tooth at each angle, surface cut lengthwise with short dense strigae and because of this surface not very shiny, in pale forms reddish brown, in dark specimens piceous. Scutellum varying from reddish brown to piceous. Elytra more shiny than prothorax although often distinctly alutaceous, humeral prominences small, and a faint basal umbone; the somewhat irregular fine striate punctures becoming faint towards apex; color varying from entirely piceous to having a reddish brown spot on humerus and another at apex, or sometimes reddish brown with a piceous sutural vitta that varies in width, occasionally entirely pale yellowish or reddish brown. Body beneath varying likewise from reddish brown to piceous (Horn noted that in southern specimens the legs are frequently dark, in northern specimens, pale). Femora not toothed, claws with long tooth. Length, 3.2–4.2 mm; width, 1.9–2.3 mm.

TYPE.—One specimen in Fabricius collection at Kiel.

TYPE-LOCALITY.—"Habitat in Caroline, Museum D'Bosc."

OTHER LOCALITIES.—*Massachusetts:* Nantucket. *New Jersey:* Anglesea, Schaeffer; H. W. Wenzel; Clementon, G. M. Greene; south of Smithtown, W. T. Davis; Lakehurst, Schaeffer; Medford, J. W. Green; Otsion Junction, J. W. Green; Linwood, J. W. Green; Chatsworth, J. W. Green; Five-Mile Beach, H. W. Wenzel. *Ohio:* Lucas County, D. J. and J. N. Knull. *Maryland:* Odenton, W. L. McAtee; Bladensburg, Hubbard and Schwarz. *Washington, D.C. North Carolina:* Holly Shelter, H. and A. Howden; 9 miles north of Wilmington, on turkey oak, D. H. Blake; Bell Island road, on oak, D. H. Blake. *South Carolina:* Eureka, W. J. Brown; Jackson, W. Tarpler; Beaufort; Bethune, J. A. Watts. *Georgia:* Swainsboro, P. W. Fattig. *Florida:* Four miles west of Archer, H. F. Howden; High Springs, Howden and Dozier; 8 miles southeast of Interlachen, H. F. Howden; Jacksonville, Ashmead, H. W. Wenzel; Haulover, Hubbard and Schwarz; Port Orange; Dunedin. *Alabama:* Mobile, H. and A. Howden; 6 miles southwest of Stapleton, H. and A. Howden; Floral, L. G. Henderson; *Texas:* Peabody, collector.

REMARKS.—Although LeConte in his description of the genus wrote that "the species which I desire to restrict the name *Metachroma* are those congeneric with *Colaspis quercata* Fabricius, the first species mentioned in Dejean's Catalogue," he described a large female (approximately 4 mm in length) of this species from Fredericksburg, Texas (Haldeman collector), as *Metachroma puncticolle.* This specimen has a dark prothorax and a dark area about the suture below the scutellum extending a little below the middle of the elytra. Following this type-specimen in LeConte's collection is a second one fully as large and then three smaller ones, all of them entirely piceous, one with a pink disc label (Middle States) and three with orange labels (Southern States). All of them have the typical strigose punctate pronotum of *Metachroma quercatum,* the unique feature of this species. Probably this arrangement in the collection was made by Crotch, because he recognized LeConte's *puncticolle* as the Fabrician species and synonymized it with *quercatum.* Horn, on the other hand, believed that Crotch had "incorrectly suppressed *puncticolle.*" A study of a large series of specimens of this variably marked species shows that Crotch was right. Fabricius himself described two color forms, one with the elytra having a rufous spot on the humerus and another posteriorly, the second form being entirely dark.

Blatchley has described as *M. strigicolle* two specimens from Dunedin, Florida. I have examined one of these specimens, and it is entirely reddish brown, a pale form of *quercatum.* Blatchley's claims that the elytral punctation is more distinct in these two specimens than in *M. quercatum* and that the elytra are not alutaceous are not substantiated in a large series of *M. quercatum* in which there is considerable variation in the distinctness of the punctation and degree of alutaceous surface, as well as in size and coloration. In short, *M. quercatum,* like so many other species of *Metachroma,* shows great variability in size, color, and punctation.

Crotch, following LeConte's lead, has designated *M. quercatum* as the genotype.

Metachroma pellucidum Crotch

FIGURE 16

Metachroma pellucidum Crotch, 1873, p. 43.—Horn, 1892, pp. 218, 219.

DESCRIPTION.—Approximately 3.5 mm in length, ovate, shining, yellow brown usually with deeper red-

dish brown head and prothorax, the latter often vaguely marked with deeper brown area on each side and finely and rather sparsely punctate; elytra unusually convex, with scarcely a trace of intrahumeral sulcus, striate punctures fine, not impressed and fading out over basal callosity, sides, and at apex.

Head with interocular space approximately half width of head, obsoletely and finely punctate over occiput, front often impunctate with a median line on vertex and transverse sulcus dividing front from clypeus, sometimes clypeus nearly impunctate but usually with a few coarser punctures, lower margin over labrum nearly straight, shining reddish brown over occiput, paler down front. Antennae extending below humeri, pale. Prothorax about a third wider than long, not as wide as elytra, with only slightly rounded sides and conspicuous tooth at each angle, shining, deep reddish brown often with deeper brown areas on each side, and with fine, not dense punctures especially on sides, intermediate median line often impunctate. Scutellum reddish brown. Elytra approximately three times as long as prothorax, convex with only trace of intrahumeral depression or depression below, striate punctures not deeply impressed or very dense and becoming faint over basal callosity, along sides, and after the middle, side rows only half as long as usual; shining pale yellowish brown with sutural edges often reddish brown. Body beneath with prosternum and area about coxae usually reddish brown, abdomen paler yellow-brown, apex of femora usually deeper brown, femora not toothed, claws with long tooth. Length, 3.4–3.8 mm; width, 1.8–2.2 mm.

TYPE.—Male, in LeConte collection, MCZ.

TYPE-LOCALITY.—North Carolina.

OTHER LOCALITIES.—*Massachusetts:* Wellfleet, Wickham, *New York:* Riverhead, V. M. Kirk. *New Jersey:* Buena, Wickham; Liebeck. *Maryland:* Bladensburg, Hubbard and Schwarz. *Washington, D.C.-Virginia:* Bancroft, J. C. Bridwell; Pennington Gap, Hubbard and Schwarz. *North Carolina:* Durham; Raleigh, H. A. Howden; Southern Pines, A. H. Manet, H. and A. Howden; Fort Bragg, Wilson. *South Carolina:* Clemson, O. L. Cartwright; Aiken, H. F. Howden. *Georgia:* Atlanta, P. W. Fattig; Wrens, L. D. Tuthill. *Alabama:* Decatur, J. D. Beamer. *Louisiana:* Caney Lake, near Minden, P. J. Spangler; Covington, H. Soltau. *Texas:* Columbus, Hubbard and Schwarz.

REMARKS.—This is another species described by Crotch that bears the Zimmermann manuscript name. In the LeConte collection there is a second specimen, following the type, that probably is the same species, but the others that follow probably are not. *Metachroma pellucidum* is more ovate and convex than the other small yellow-brown species in the southeastern United States such as *M. testaceum, M. anaemicum,* and *M. marginale.* Apparently there is little variation in its coloring. It can be distinguished by the convex shape of the elytra, without a conspicuous intrahumeral sulcus, by the fine punctation on the pronotum, and by the very fine elytral punctation that fades away at the sides and apex.

Metachroma texanum Schaeffer

FIGURE 17

Metachroma texanum Schaeffer, 1919, p. 327.

DESCRIPTION.—Between 3.5 and 4.0 mm in length, ovate, shining yellow-brown with prothorax, scutellum, and usually sutural edges deep reddish brown; prothorax densely and finely punctate, elytra without depressions and with straight rows of punctures distinct to apex.

Head with interocular space approximately half width of head, yellow-brown with piceous jaws, occiput and front obsoletely and faintly punctate, a faint median line, no transverse sulcus separating clypeus, which has more distinct punctures and is alutaceous, anterior margin of clypeus only slightly emarginate, in some specimens straight over labrum. Antennae pale. Prothorax about a third wider than long, and nearly as wide as elytra, moderately convex with rounded sides and the usual tooth at each angle, deep dark reddish brown, densely but not coarsely punctate. Scutellum dark reddish brown. Elytra slightly more than twice as long as prothorax, convex, surface without depressions except a faint short intrahumeral sulcus, smooth, shining, and tapering at apex; pale yellowish brown, usually with reddish brown sutural edges; striate punctures not too closely set and in straight rows, visible to apex. Body beneath deep reddish brown to piceous, with tip of abdomen often paler. Legs pale, sometimes apex of femora darker. Claws with short basal tooth. Length, 3.5–3.8 mm; width, 1.8–2 mm.

TYPE.—In USNM, with six paratypes.

TYPE-LOCALITY.—Esperanza Ranch, Brownsville, Texas.

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OTHER LOCALITIES.—*Texas:* Brownsville, R. H. Beamer; Macdona, H. W. Wenzel; Cameron County, H. W. Crowder, L. D. Beamer; Port Isabel, on ragweed; Seabrook, H. W. Wenzel; Katherine; Loma; Galveston, Bryant, Becker; Boca Chica, H. F. Howden; Wilder Wildlife Refuge. *Alabama:* Mobile, H. P. Loding. *Louisiana:* Cameron, J. S. Hine, B. T. McDermott. *Florida:* Tampa, R. H. Beamer; Key Largo, R. H. Beamer.

REMARKS.—The ovate shape, the large dark prothorax that is almost as wide as the elytra and nearly half as long, and the tapering elytra without depressions and with straight rows of punctures make this species easily recognizable. There appear to be no color variations.

Metachroma floridanum Crotch

FIGURE 19

Metachroma floridanum Crotch, 1873, p. 43.—Horn, 1892, p. 219.

DESCRIPTION.—Between 4.4 and 5.3 mm in length, elongate oblong oval, not very shiny, pronotum dull alutaceous and very finely punctate, elytra not quite so dull, entirely pale yellow-brown except deeper brown jaws; elytral striate punctation fine, closely set, but not deeply impressed and often disappearing before apex.

Head with interocular space approximately half width of head, a well-marked transverse sulcus dividing front from clypeus and a median depressed line on front, finely punctate, alutaceous, pale yellow except reddish brown jaws. Antennae pale, extending below humeri. Prothorax not quite twice as broad as long, not very convex, depressed over head, sides arcuate with a tiny, inconspicuous tooth at each angle; surface dull alutaceous with scattered, very fine punctures, entirely pale yellow-brown. Scutellum pale, alutaceous. Elytra more than three times as long as prothorax and wider, very finely alutaceous, a little more shiny than pronotum with only a trace of intrahumeral sulcus and transverse depression below basal umbones; striate punctures over base very fine and not impressed, coarser below, but becoming fine and inconspicuous towards apex. Body beneath and legs entirely pale, femora not toothed, claws with long tooth. Length, 4.4–5.3 mm; width, 2–2.6 mm.

TYPE.—In Le Conte collection, MCZ, with two other specimens from Capron, Florida.

TYPE-LOCALITY.—St. John's Bluff, East Florida (Doubleday, collector).

OTHER LOCALITIES.—*Florida:* Capron; Miami, M. W. Sanderson; South Miami, on lettuce leaf; Palm Beach, on *Pithecolobrium* seedpod; West Palm Beach, J. E. Porter; Cocoanut Grove, on avocado leaf; Palmetto, on *crotalaria* pods; Stuart, Bryant; Haulover, F. Knab; Jacksonville, F. Knab; Port Orange; Fort Lauderdale, J. W. Green; St. Petersburg; Sanford, E. S. Ross; New Smyrna, M. Wright. *Georgia:* Tybee Island, H. A. Wenzel; St. Simons Island; *South Carolina:* Mount Pleasant, on *hibiscus;* Hilton Head, on sugar cane; Myrtle Beach; Awendam, on cotton, V. M. Kirk; Pawley's Island, O. L. Cartwright. *North Carolina:* Holden Beach. *Arkansas:* Hot Springs. *Tennessee:* Lookout Mountain.

REMARKS.—The localities of Arkansas and Tennessee probably are incorrect, since all the other records are for Florida and along the coast northward on islands and beaches from Tybee Island, Georgia, to Holden Beach, North Carolina, and I believe this is the true range of the species. It is a readily recognizable beetle because there are no confusing color variations, all the specimens being pale yellow-brown with a distinctive dull alutaceous surface on the prothorax and, to a lesser degree, on the elytra.

Metachroma anaemicum Fall

FIGURES 21, 23

Metachroma anaemicum Fall, 1927, p. 138.

DESCRIPTION.—Between 2.5 and 3.0 mm in length, oblong oval, shining, pale yellow-brown, prothorax densely but finely punctate, elytra with striate punctures becoming faint in apical half.

Head with interocular space slightly more than half width of head, rounded over occiput, almost impunctate, a median linear depression on vertex and a clear-cut transverse sulcus dividing front from clypeus and connected with orbital groove; punctures over occiput very indistinct, more distinct and dense on clypeus, pale yellow-brown with piceous jaws. Antennae pale, extending below humeri. Prothorax twice as wide as long with rounded sides and not very convex, a little depressed over head, densely and distinctly punctate

except along base; entirely pale yellow-brown. Scutellum pale. Elytra more than three times as long as prothorax and wider, with well-marked humeri and intrahumeral sulcus, distinct basal umbone and transverse groove below it; striate punctation distinct in basal half but fading away in apical half; entirely pale yellow-brown. Body beneath yellow brown. Femora not toothed, claws with long tooth. Length, 2.5–3 mm; width, 1.3–1.6 mm.

TYPE.—In Fall collection, MCZ, with other specimens from Enterprise, St. Petersburg, Dunedin, and West Palm Beach, Florida, and one specimen from St. Simons Island, Georgia.

TYPE-LOCALITY.—West Palm Beach, Florida.

OTHER LOCALITIES.—*Florida*: Daytona Beach, G. T. Riegel; Chiefland, on *Quercus virginiana*, Stannard; Coronado, D. M. Castle; St. Augustine; Crescent City, Hubbard and Schwarz; Bartow, Hubbard and Schwarz; Hudson, P. B. Lawson; Lake Placid, E. Todd; Indian River; Fort Capron; Jacksonville, Ashmead; Branford, L. D. Tuthill; Inverness, R. H. Beamer; Wakullah, P. B. Lawson; Sanford, R. H. Beamer; Old Town, P B. Lawson; Tampa, Hubbard and Schwarz; Enterprise; Jupiter, H. W. Wenzel; *Georgia:* Okefenokee Swamp, F. W. Fattig; Tybee, H. W. Wenzel.

REMARKS.—For some reason, Crotch did not describe a specimen of this species that he got from the Zimmermann collection and that now is in the LeConte collection. Fall, in describing the species for the first time, refers to this specimen and the Zimmermann manuscript name but named the species *anaemicum*; I have found the Zimmermann manuscript name in old collections that have been identified from this specimen.

This species is closely related to *M. testaceum* Blatchley, another species from Key West and Cuba, but *M. anaemicum* is paler yellow and has fainter elytral punctures. In *M. testaceum* the transverse sulcus across the front of the face is more distinct, the integument appears thicker and less transparent, and the punctation is much stronger. The aedeagi are similar, but in *M. testaceum* there are widely separated side arms at the apex. *Metachroma anaemicum* is found throughout Florida and even into southern Georgia, whereas *M. testaceum* is found only on the Keys and at the tip of the Florida peninsula.

Metachroma viticola Linell

FIGURE 22

Metachroma viticola Linell, 1898, p. 481.

DESCRIPTION.—Between 4.0 and 5.8 mm in length, oblong oval, lustrous; head, elytra, legs, and antennae usually yellow-brown; prothorax convex, deep reddish brown, minutely punctate; body beneath varying from yellow-brown to piceous; elytra convex and without depressions, striate punctures in straight lines, visible to apex although finer in apical half.

Head with interocular space approximately half width of head, occiput minutely punctate with a faint median depression on vertex, no transverse sulcus dividing front from clypeus, clypeus wide and deeply emarginate anteriorly over labrum, alutaceous with fine, sparse punctures, jaws piceous. Antennae extending below humeri, slender, yellow-brown with deeper brown outer joints. Prothorax about a third wider than long, strongly convex with arcuate sides, a very small tooth at each angle, disc lustrous deep reddish brown, minutely punctate. Scutellum reddish brown. Elytra more than twice as long as prothorax and not much wider, smoothly convex, without depressions, only a faint intrahumeral sulcus, striate punctures rather coarse and not dense, finer towards apex and visible throughout, on sides short rows somewhat confused between regular rows; yellowish or even deep reddish brown, often in paler specimens sutural edges deep reddish brown, very shiny, Body beneath shining, with few punctures, varying from yellow-brown to piceous, legs pale, femora not toothed. Claws with long tooth. Length 4–5.8 mm; width, 2.4–2.9 mm.

TYPE.—USNM 1294, with four paratypes.

TYPE-LOCALITY.—Brighton, Texas (on grape, June 27, 1895, J. Taylor, collector).

OTHER LOCALITIES.—*Texas:* Cameron County, J. G. Shaw; Galveston, F. H. Snow; O. Bryant; Aransas, P. Monarda; Port Aransas, H. and A. Howden; Boca Chica, 25 miles east of Brownsville, H. and A. Howden; Tarpon Beach, Padre Island. *Louisiana:* Cameron. *Mexico:* 16 miles south of Tecolutla, Vera Cruz, University of Kansas Mexican Expedition.

REMARKS.—This is very close to *M. convexum*, a species that Jacoby described from Nicaragua. Linell described *M. viticola* from Texas, and, except for three specimens from Cameron, Louisiana, I have seen no others outside of Texas in the United States. Schwarz identified the three Louisiana specimens as *M. ustum*

LeConte, probably because they were so much larger than the Linell types from Texas and were a deeper reddish brown. The ovate, convex shape with the resulting absence of any elytral depression is the distinguishing character of this species as well as of *M. convexum* Jacoby. The latter species has a dark median spot on the occiput and sometimes a spot or vitta on each elytron, which is lacking in *M. viticola*. Otherwise, the two species appear much the same, even to the aedeagus. One specimen of *M. viticola* has been taken in Vera Cruz, Mexico.

Metachroma angustulum Crotch

FIGURES 24, 25

Metachroma angustulum Crotch, 1873, p. 41.—Horn, 1892, p. 216 (in part).—Wilcox, 1953, p. 57.
Metachroma parallelum Horn, 1892, p. 216.

DESCRIPTION.—From 5.0 to 7.0 in length, elongate oblong oval, shining, prothorax rather flat with fine and not-dense punctures; elytra with fine, dense, and somewhat irregular striate punctures between which, especially on sides, intervals tend to be costate, punctation on sides dense and confused, coloring variable, head, antennae, and legs usually yellow-brown; antennae unusually long, with outer joints often dark and considerably thicker in male; prothorax and elytra varying in color from pale to piceous, the latter often with a wide lateral dark vitta.

Head with interocular space half width of head, finely and not densely punctate on front but more densely and coarsely on clypeus which appears depressed between swollen inner side of antennal sockets, anterior margin of clypeus straight over labrum, a short median depression on front but no transverse sulcus; head occasionally entirely pale but in some dark specimens clypeus dark. Jaws unusually small. Antennae extending nearly to middle of elytra, with apical joints widening in male and often darker. Prothorax about a third wider than long and not as wide as elytra; flat and often with a small oblique depression on either side in basal half; sides rounded, surface shining, finely and not densely punctate, color varying from pale to piceous, toothing at angles not conspicuous. Scutellum pale or piceous. Elytra more than three times as long as prothorax, elongate, with prominent humeri and deep intrahumeral sulcus, striate punctures fine, dense, and somewhat irregular, with confused punctures about scutellum and many confused small punctures on sides; intervals tending to be costate; color varying from entirely pale yellow-brown to pale yellow-brown with a dark lateral vitta of varying width, to being entirely piceous. Body beneath also varying in color but prosternum and metasternum usually darker than abdomen; legs usually pale, femora sometimes dark; femora not toothed, claws with long tooth. Length, 4.8–7.0 mm; width, 2.0–3.2 mm.

TYPE.—*M. angustulum,* in LeConte collection, MCZ; of *M. parallelum,* in Horn collection, PAS.

TYPE-LOCALITIES.—"Mo." (*angustulum*); Montana (*parallelum*).

OTHER LOCALITIES.—*Pennsylvania:* Erie. *Ohio:* Sandusky; Cedar Point; Erie County. *Indiana:* Terre Haute, Clark, A. B. Wolcott. *Illinois:* Lake Superior; southeast of Beaverville, on willow, M. W. Sanderson; Meredosia, M. W. Sanderson; Keithsbury, on evening primrose, St. Anne, M. W. Sanderson; Bath, on willow, M. W. Sanderson. Oquawka, Henderson County, on pepper plants, Joe Vandemark; Beardstown, M. W. Sanderson; Mason State Forest, Mason County, F. M. Campbell. *Indiana:* Tippicanoe County, N. M. Downie, on willow and poplar; Dunes State Park, N. M. Downie. *Michigan:* Warren Dunes, N. M. Downie. *Wisconsin:* Princeton, on apple foliage, L. G. Gentner. *Minnesota:* Fort Snelling. *Iowa:* Cedar Rapids; Council Cliffs, on milkweed, F. H. Shoemaker; Iowa City, Wickham. *Nebraska:* Dawson County; West Fort; Forest Reserve, Halsey, F. H. Shoemaker. *Kansas:* Garden City, Clark County, at 1,962 feet, F. H. Snow; Medora, W. Knauss, W. Benedict; Jewel County, H. Deny. *Montana:* Hubbard and Schwarz. *Ontario:* Mount Pelee, on willow, W. J. Brown; Normandale, W. J. Brown, G. S. Walley.

REMARKS.—Although Crotch described under *M. angustulum* four color varieties, Horn believed that Crotch had confused two species and described a piceous specimen as *M. parallelum.* Crotch's type-specimen has black elytra and a pale prothorax. John Wilcox has refuted Horn's notion and synonymized *parallelum* with *angustulum.* In short, this is another species of *Metachroma* that shows the usual wide variation in color. The species may be recognized by its elongate shape, flat prothorax, and unusually long thick antennae in the male.

John Wilcox has noted a certain color dimorphism in the sexes. Unlike *M. interruptum* (Say), the other species known to have this characteristic, in this species the male is usually dark (*parallelum*) and the female

pale (*angustulum*). There are, however, rare exceptions in which the male also may be pale.

Metachroma maculipennis Schwarz

FIGURE 26

Metachroma maculipennis Schwarz, 1878, p. 366.

DESCRIPTION.—Between 3.5 and 4.5 mm in length, broadly oblong oval, convex, shining, head often with a median dark spot on occiput, prothorax deep reddish brown, in paler specimens with a vague, deep brown, M-shaped marking, elytra not so reddish, usually a yellowish brown with two or three piceous spots on each elytron and dark sutural edges, striate punctures not so pronounced over basal umbones and fading at apex.

Head with interocular space approximately half width of head, occiput and front alutaceous and rather obsoletely punctate, a deep transverse groove separating front from clypeus, latter densely and coarsely punctate; occiput frequently dark with a median dark plaga down front, jaws piceous. Antennae extending below humeri, apical joints tending to be darker. Prothorax about a third wider than long, moderately convex with widely rounded sides and tooth at each angle with the anterior ones longer, deeper reddish brown than elytra, often with a darker M-shaped marking; surface shining, moderately densely and coarsely punctate, sometimes with a smooth median area. Scutellum dark reddish brown. Elytra less than three times as long as prothorax and not much wider, convex, with only short intrahumeral sulcus and no transverse depression or apparent basal umbones, striate punctures regular but not so pronounced over apical half; yellowish or reddish brown with dark sutural edges and three small piceous spots on each elytron—one before, one after the middle, and a third near margin below humerus, in paler specimens one or all spots may be lacking. Body beneath usually with dark prosternum and metasternum, abdomen pale reddish or yellowish brown. Legs pale. Femora not toothed, claws with long basal tooth. Length, 3.8–4.7 mm; width, 2.2–2.5 mm.

TYPE.—In USNM with seven paratypes.

TYPE-LOCALITY.—Enterprise, Florida (on oak).

OTHER LOCALITIES.—*Florida:* LaBelle, P. B. Lawson; Sebastian, Hubbard and Schwarz; Royal Palm Hammock, State Park, W. R. Mason; St. Lucie, Hubbard and Schwarz; Barlow, Hubbard and Schwarz; Hernando County, O. C. Tigner; Hilliard, F. G. Weyansk; Enterprise; Miami. *Georgia:* Okeefenokee Swamp, Hardy, R. H. Beamer; Tybee Island, D. M. Castle, H. A. Wenzel.

REMARKS.—This is a short, broad species with a wide and densely punctate pronotum and very convex elytra. There is little variation in coloring although in pale specimens some or occasionally all of the elytral spots may be missing. The squat shape and rather coarse and dense pronotal punctation readily identify this small beetle.

Metachroma testaceum Blatchley

FIGURES 28, 30

Metachroma testacea Blatchley, 1920, p. 70.

DESCRIPTION.—From 2.3 to 3.3 mm in length, oblong oval, shining, head and prothorax reddish brown, elytra usually paler yellowish brown, sides of prothorax widely rounded, surface finely and densely punctate, elytra with striate punctures moderately dense and deep, distinct throughout, aedeagus with apex widely parted in two prongs.

Head with interocular space approximately half width of head, a faint transverse sulcus dividing clypeus from front and a short median depression on vertex, densely punctate, deep reddish brown with darker jaws. Antennae extending below humeri, yellowish brown. Prothorax shining reddish brown, approximately twice as wide as long, with widely rounded sides, not very convex and depressed over head, densely but not coarsely punctate. Scutellum reddish brown. Elytra three times longer than prothorax and paler, with regular rows of striate punctures becoming finer at apex, a short intrahumeral sulcus and transverse depression below basal callosities. Body beneath and legs pale reddish brown or yellowish brown. Femora not toothed, claws with long tooth. Length, 2.3–3.3 mm; width; 1.3–2 mm.

TYPE.—Of *M. testaceum,* in Blatchley collection, Purdue University; of *M. elachistum* Blake, USNM 64670.

TYPE-LOCALITIES.—Key West, Florida (*M. testaceum*); shore near Havana, Cuba (*M. elachistum*).

OTHER LOCALITIES.—*Florida:* Key West, Hubbard and Schwarz; Wickham, R. H. Beamer; Ramrod Key, on guava flowers; Key Largo, R. H. Beamer; Marathon, H. S. Barber. Biscayne, Hubbard and Schwarz.

Cuba: Cayamas, Schwarz, Mariano, F. de Zayas. *Eleuthera Island.*

Metachroma testaceum elachistum Blake, new status

Metachroma elachistum Blake, 1960, p. 97.

REMARKS.—In the USNM collection are specimens from Cayamas, Cuba, determined by Schwarz as *M. puncticollis* Suffrian (changed by Clavareau, Junk's catalog, 1914, to *cubaecola*). Suffrian's description, however, does not apply in several regards, and until someone can compare with Suffrian's type, I believe Blatchley's name should stand. These Cuban and Eleutheran specimens are noticeably smaller and deeper reddish brown in coloring than the ones from the mainland. In this difference in size the subspecies is like *M. terminale* Horn (1892), a species which also occurs on the tip of Florida, on the Keys, and in Cuba, and specimens from Cuba that were named by Suffrian (1868) as *M. adustum*. I believe the island form is subspecific, so am retaining the name *elachistum* as a subspecies.

Metachroma magnipunctatum, new species

FIGURE 27

DESCRIPTION.—Between 5.0 and 5.5 mm. in length, elongate oblong oval, head, prothorax, body beneath, apex of femora, and often tibiae dark reddish brown, almost piceous, a dark marking from humerus to middle of elytra and another spot below middle; prothorax rather flat; dense, coarse punctures on head, pronotum, and elytra.

Head with interocular space approximately half width of head, coarsely and rugosely punctate throughout with scarcely a trace of transverse sulcus or median linear depression, deep reddish brown, almost piceous. Anterior margin of clypeus with very small emargination over labrum. Antennae long and slender with five apical joints dark. Prothorax approximately a third wider than long with rounded sides, not very convex, rather flat, surface densely and in one of the two specimens rugosely punctate; deep dark brown. Scutellum dark. Elytra about three times as long as prothorax and only a little wider, densely and coarsely striate punctate, punctures distinct to apex, deep-set so that intervals in basal half and along sides are somewhat costate; a transverse depression below basal callosities; surface shining yellow-brown with deep brown to piceous marking on humerus extending diagonally to a large median spot, another median spot in apical half and a slight submarginal spotting below humerus. Body beneath dark brown, femora with apices dark, tibiae tending to be dark and tarsi in one specimen also dark. Femora not toothed, rather hairy, claws with long basal tooth. Length, 5.0–5.5 mm; width, 2.3–2.4 mm.

TYPE.—Male, in Frey Museum. Paratype, female, in USNM.

TYPE-LOCALITY.—Kentucky.

REMARKS.—Bechyne has identified this beetle as *M. interruptum* (Say), probably because of the elytral markings, which somewhat resemble those of that species. That color pattern, however, is found in a number of species of the genus. This new species has a proportionately larger prothorax than has *M. interruptum*, and the entire beetle is much more coarsely punctate. There is no toothing of the femora, and the aedeagus is different. This species is characterized by the strong and numerous punctures, especially on the sides and apex of the elytra. There are no other specimens like these two from the Frey Museum in any collection that I have examined in the United States. In this pair, a male and female, the markings are alike.

Metachroma interruptum (Say)

FIGURES 29, 31, 32

Colaspis interruptus Say, 1823, p. 448.
Metachroma interruptum Crotch, 1873, p. 42.—Horn, 1892, pp 211, 216.

DESCRIPTION.—Between 4.4 and 6.0 mm in length, oblong oval, shining, prothorax not very convex and rather finely punctate on sides with a median impunctate area, usually female with darker markings than male, with a large piceous spot on each side of pronotum which in male is either lacking or reduced, on elytra in female a vitta from humerus to middle, also a short vitta below the middle, in male elytra often without markings, suture and margin more or less dark in female; striate punctures regular, fading at apex.

Head with interocular space approximately half width of head, coarsely and densely punctate, with clypeus even more coarsely and densely punctate, anterior margin of clypeus broad and nearly straight over labrum, no transverse sulcus separating front from clypeus, a small depression in middle of front; yellow-brown with piceous jaws. Antennae extending below

humeri, in darker specimens yellow-brown with dark apical joints. Prothorax not twice as broad as long, not very convex, with well-rounded sides and small tooth at each angle, rather finely punctate on the sides, usually with a median impunctate area. In female a large brown spot on either side, sometimes entire surface dark; in male only faint brownish traces of this darker area. Scutellum varying from pale to piceous. Elytra three times as long as prothorax, with regular, close-set, striate punctures somewhat impressed, so intervals in basal half appear slightly costate, on sides punctures often dense and confused, usually a row along side extending up on inner side of humerus, fading at apex; surface yellow-brown, in male, often without any dark markings, in female, with deep reddish brown or piceous vittate markings or spots, sometimes all but apex and sides dark, suture and margin always dark. Body beneath varying from pale in male to piceous in dark females; femora with minute tooth, claws with long tooth. Length, 4.4–6.0 mm; width, 2.2–3.2 mm.

TYPE.—Whereabouts unknown. Most of Say's collection is lost.

TYPE-LOCALITY.—"Inhabits Arkansa, near the Rocky Mts."

OTHER LOCALITIES. *Georgia:* Thomasville, P. W. Fattig. *Florida:* Suwanee Springs, R. H. Beamer. *Texas:* Presidio, Peale, L. W. Hepner. *Louisiana:* Shreveport, on pecan, B. G. Sitton. *Illinois:* E. Dubuque, M. W. Sanderson. *Indiana:* Tippicanoe County, on poplar, N. M. Downie. *Kansas:* Cheyenne County, at 3,300 feet, F. X. Williams; Medora, D. R. Lindsay, W. Benedict. *Wyoming:* 40 miles north of Lusk.

REMARKS.—Apparently this species is more or less dimorphic in its coloring, the male often being entirely pale without dark markings, the female usually with dark spots on pronotum and interrupted vittae on the elytra. In a series from Shreveport, Louisiana, 48 females have dark markings and 23 males either have very faint markings or are entirely pale. Sometimes in the female the dark markings lead to the pronotum being entirely dark, and the elytra also may be piceous except perhaps at the apex, as in *M. adustum terminale* Horn. In distinguishing these dark females from such species as *M. suturale* LeConte the characters to look for are the rather flat prothorax and long elytra. There is one other peculiarity to be noted in the lateral striae—one row runs up on the inner side of the humerus. This characteristic is not unique to this species, as it also is found in *M. angustulum* Crotch and in *M. longipennis,* described herein. All three species have unusually long elytra.

Metachroma ustum LeConte

FIGURES 33, 34, 36

Metachroma ustum LeConte, 1858, p. 85.—Crotch, 1873, p. 41.—Horn, 1892, p. 214.

DESCRIPTION.—Between 4.8 and 7.0 mm in length, broadly oblong oval, lustrous yellow-brown, head and prothorax and often body beneath deep reddish brown, sometimes in darker specimens a dark reddish brown area varying in width along suture; pronotum polished, often nearly impunctate, elytral striae becoming faint at apex, femora toothed.

Head with interocular space about half width of head, shining yellowish or reddish brown, obsoletely punctate on front, more distinctly and coarsely punctate on clypeus which is alutaceous, without transverse sulcus between it and front, anterior margin widely emarginate over labrum; usually a median linear depression on front, jaws dark. Antennae slender, extending below humeri, pale in most specimens but those with elytral darkening often have deeper brown outer joints. Prothorax broad and strongly convex with widely rounded sides and well-developed tooth at each angle; lustrous dark reddish brown, in type-specimen distinctly punctate, but usually appearing nearly impunctate or only very finely punctate. Scutellum reddish brown. Elytra not three times as long as prothorax, usually paler yellowish brown, in darker specimens with sutural edges and sometimes area half as wide as elytra deeper brown, nearly piceous sometimes, this dark area not extending to apex in any specimens examined; a faint intrahumeral depression and faint transverse depression below basal callosities; striate punctures somewhat variable in size, often very small over base, becoming coarser in transverse depression and indistinct towards apex, well defined along sides. Body beneath reddish brown, often deeper at apex of femora and base of tibiae, femora toothed. Claws with long tooth. Length, 4.8–7.0 mm; width, 2.5–3.5 mm.

TYPE.—In LeConte collection, MCZ.

TYPE-LOCALITY.—"Sonora. Webb."

OTHER LOCALITIES.—*Texas:* Rockport, J. G. Shaw; Columbus, Hubbard and Schwarz, Fenyes; "Texas," J. B. Smith, M. L. Linell; Esperanza Ranch, Brownsville, Charles Schaeffer, T. N. Knull; Hearne, E. L.

Deven; Victoria, J. D. Mitchell; Corsicana, H. Soltau; Trinity, on cotton, F. C. Bishop; Canadian, W. M. Mann; Palestine, R. C. Howell; Giddings, on cotton, E. S. Tucker; Kerrville, F. C. Pratt; Hidalgo County, J. N. and D. J. Knull; Robstown, on string beans; Wilder Wildlife Refuge, near Sinton, H. F. Howden. *Florida:* Big Pine Key, on sawgrass.

REMARKS.—In the LeConte collection are two specimens—one bearing the type label and "Webb," and one without a locality label. Also, there are two other specimens, from Columbus, Texas, that probably are from the same series (in USNM) as collected by Hubbard and Schwarz. The type-specimen has a distinctly punctate prothorax, whereas in most specimens the surface is so polished as to appear nearly impunctate.

This species belongs to a group that extends from Texas, through Mexico, into Guatemala and Honduras and that is composed of the biggest and broadest specimens of *Metachroma*. Some specimens of *M. ustum* from Hidalgo, Texas, are fully as large as specimens labeled *M. variabile* Jacoby from Zapote, Guatemala, and *M. regulare* Jacoby from Playa Vicente, Mexico. In fact, I strongly suspect that they may all be LeConte's species, later described by Jacoby under the above names. There is, as Jacoby implied in his name *variabile*, great variability in size as well as coloring in this group. In the Texas specimens is a series from Robstown in which the elytra have a darker reddish brown area, some specimens with only dark sutural edges, and others with a broader area extending to the middle of the elytra but not downward to the apex. Jacoby (in *Biologia Centrali Americana*) has illustrated a similar sort of dark coloring in his figure of the specimen of *M. variable* from Zapote.

I have not seen any specimens of *M. ustum* from north or west of Texas.

Key to Species Found from Western Texas to Rocky Mountains and California

1. Small, 3 mm or less in length. (Montana) ..... ***M. montanense,*** new species
   Larger 2
2. Claws simple 3
   Claws with basal tooth 4
3. Elytra with punctures impressed and intervals somewhat costate, usually with 2–4 spots. (Arizona, New Mexico, Nevada) ..... ***M. longulum*** Horn
   Elytra with striate punctures not impressed nor intervals costate and without spots or dark markings. (Idaho to Lower California) ..... ***M. immaculatum,*** new species
4. Elytra in female with strong costae. (Southern California, Mexico) ..... ***M. coronadense*** Fall
   Elytra only moderately or not at all costate 5
5. Elytra moderately costate 6
   Elytra not at all costate 9
6. Elytra with large dark markings in apical half. (Kern County, California) ***M. nigrosignatum,*** new species
   Elytra without dark markings in apical half 7
7. Aedeagus broad but narrowing rather abruptly near apex into a narrow tip; claw with short basal tooth. (Southern California, Arizona, New Mexico) ..... ***M. bridwelli,*** new species
   Aedeagus narrowing gradually to a narrow tip; claw with a short basal tooth. (California, Arizona, New Mexico, western Texas) ..... ***M. californicum*** Crotch
   Aedeagus broad at end with a small median tip; claw with a long tooth. (California, Arizona, New Mexico) ..... ***M. occidentale,*** new species
9. Prothorax usually with four spots; aedeagus broadly rounded at tip. (Mexico, southern Arizona) ..... ***M. quadrimaculatum*** Jacoby
   Prothorax without spots, aedeagus either broad with median tip or gradually narrowed to apex 10
10. Aedeagus broad at apex, not narrowed gradually 11
    Aedeagus narrowed gradually at apex 12
11. Elytra three times as long as prothorax, yellowish or reddish brown, lateral stria extending up on inner side of humerus. (Mountains of southern Arizona) .. ***M. longipennis,*** new species
    Elytra not three times as long as prothorax, either entirely piceous or reddish brown with piceous sutural darkening of varying width, lateral stria not extending up on inner side of humerus. (Texas west to New Mexico and Arizona) ..... ***M. suturale*** LeConte
12. Striate punctures distinct to apex. (Southern California, Mexico) ..... ***M. coronadense*** Fall
    Striate punctures not distinct to apex 13

13. Claws with basal tooth moderately long. (West Texas) ..... ***M. presidiense,*** new species
    Claws with minute basal tooth 14
14. Prothorax densely and rather coarsely punctate. (Idaho) ..... ***M. sandersoni,*** new species
    Prothorax not coarsely punctate 15
15. Interocular space more than half width of head, elytra not quite three times as long as prothorax, aedeagus narrowing to a point. (Utah) ..... ***M. utahense,*** new species
    Interocular space half width of head, elytra a little more than twice as long as prothorax, aedeagus broad with short narrowing to apex. (Northern California)
    M. septentrionale, new species

Metachroma suturale LeConte

FIGURES 55, 56

Metachroma suturale LeConte, 1858, p. 85.
Metachroma dubiosum Crotch (not Say), 1873, p. 41.
Metachroma aterrimum Horn, 1892, pp. 214, 215.

DESCRIPTION.—Between 4.8 and 6.4 mm in length, broadly oblong oval, lustrous, varying in color from yellow-brown with a dark elytral sutural vitta of varying width to deep reddish brown or piceous with the sutural vitta in some specimens so wide as to cover entire elytra, in these darker specimens prothorax also dark (*M. aterrimum Horn*), pronotum with variable degrees of punctation but never so lightly punctate as in *M. ustum* LeConte. Femora toothed.

Head with interocular space approximately half width of head, no transverse sulcus dividing front from clypeus, a short median depression on front, occiput densely and coarsely punctate, less so on front, clypeus also densely and coarsely punctate, with anterior margin over labrum widely and shallowly emarginate; shining, varying from deep reddish or even piceous to dark piceous with two reddish brown spots on front. Antennae extending below humeri, usually yellowish or reddish brown, but in dark specimens outer joints dark. Prothorax not twice as wide as long, convex, with widely curved sides, a tooth at each angle, surface lustrous, punctation variable, from being fine and sparse to dense and coarse, in color varying from reddish brown to piceous. Scutellum dark. Elytra more than twice as long as prothorax, lustrous, a slight basal umbone with a transverse depression below; striate punctation in basal half well developed but after middle tending to fade out, color varying from deep reddish brown with a dark sutural vitta or dark sutural edges to entirely piceous. Body beneath also varying from reddish brown to piceous, legs usually yellowish brown but in some dark specimens also entirely dark; apex of femora usually dark. Claws with long basal tooth. Femora toothed. Length, 4.8–6.4 mm; width, 2.5–3.3 mm.

TYPE.—In LeConte collection, MCZ. (Type of *M. aterrimum* Horn in Horn collection, PAS.)

TYPE-LOCALITY.—"Texas, Mr. Haldeman." (Type-locality of *M. aterrimum:* "Occurs in New Mexico.")

OTHER LOCALITIES.—*Texas:* Valentine, R. H. Beamer; The Basin, Big Bend National Park, K. Roever; H. and A. Howden, Howden and Becker; Green Valley, Brewster County, H. W. Wenzel; Alpine, at 4,400–6,000 feet, Wickham; Round Mountain, H. W. Wenzel; Chisos Mountains, Triplehorn, Knull; Davis Mountains, D. J. and J. N. Knull; Fort Davis, Howden and Becker; 10 miles west of Fort Davis, H. and A. Howden. *New Mexico:* Santa Fe, Gisler. *Arizona:* Douglas, F. H. Snow; San Bernardino Ranch, Cochise County, at 3,750 feet, F. H. Snow.

REMARKS.—In the LeConte collection Crotch has put the label *M. dubiosum* on the type-specimen below LeConte's label "*M. suturale* Lec. Hald." And in his paper of 1873 Crotch synonymized *M. suturale* with *M. dubiosum* (Say), a much smaller species from the midwest, probably because the markings of LeConte's *suturale* resemble those of some specimens of Say's *dubiosum* (*pallidum*). Horn may have been confused by this synonymyzing, as he writes in his description of *M. suturale* that the "larger measurement is on the authority of Dr. LeConte, as none in my cabinet are of that size," and yet he has retained LeConte's name, *suturale*. Furthermore, he has described the dark form (in which the beetle is entirely piceous black) as *M. aterrimum,* writing that "*suturale*" is of "shorter form."

In reality, as LeConte wrote, *M. suturale* is closely related to *M. ustum* LeConte, although "differing in the arrangement of the colors." *M. ustum* in fact does have forms with markings similar to typical *suturale*, as occasionally there is a deeper brown sutural vitta or area, although in its typical and usual coloring it is an entirely yellowish or reddish brown beetle. The thorax in *suturale* is usually more densely and coarsely punctate than in *ustum*, in which the surface is nearly impunctate in most specimens.

As for *M. aterrimum* Horn, a large series of specimens from the Chisos Mountains and Davis Mountains in western Texas leaves no doubt that *M. suturale* and *M. aterrimum* are the same, the latter name being applied to entirely dark beetles and the former to those having only the sutural vitta dark. While *M. ustum* extends from Texas southwards into Mexico, *M. suturale* extends from western Texas westward through New Mexico into Arizona, and the western specimens are generally darker.

Metachroma californicum Crotch

FIGURES 40, 41

Metachroma californicum Crotch, 1873, p. 41.—Horn, 1892, pp. 213–214.

DESCRIPTION.—Between 4.5 and 5.8 mm in length, elongate oblong oval, shining pale yellowish or reddish brown, prothorax strongly and densely punctate, especially on sides, with deeper reddish brown areas on each side; elytra usually paler yellowish or reddish brown with moderately coarse, closely set, striate punctures rather deeply impressed, becoming less so at apex, sutural edges often deeper reddish brown.

Head with interocular space half width of head, finely and densely punctate throughout with clypeus more coarsely punctate, a median frontal linear depression and sometimes a trace of transverse line between front and clypeus, anterior margin of clypeus emarginate over labrum. Antennae pale. Prothorax not very convex, about a third wider than long, with rounded sides, a long tooth at anterior angle; surface strongly and densely punctate with sometimes a median linear impunctate area; yellow-brown with reddish brown areas frequently on each side. Scutellum pale yellow-brown. Elytra usually paler than prothorax, nearly three times as long as prothorax and very little wider; striate punctures rather coarse, closely set and impressed in basal half, producing a distinctly costate effect in intervals; along side several straight rows of punctures with some confused punctures between. Body beneath and legs pale yellow brown; front and hind femora minutely toothed; claw with tiny basal tooth. Length, 4.5–5.8 mm; width 2.5–3 mm.

TYPE.—In LeConte collection, MCZ, with two paratypes.

TYPE-LOCALITY.—California (indicated by golden disc on pin).

OTHER LOCALITIES.—*California: San Ysidro,* on *Pluchea serica;* Imperial County, E. S. Ross, J. C. Bridwell; Blythe, E. P. Van Duzee, D. J. and J. N. Knull; Holtville, E. S. Ross; Laguna Mountain, J. O. Martin; Chino Canyon, Warwick Benedict. *Arizona:* S. Luis, Yuma County, Van Dyke; Ehrenberg, P. C. Grassman; Van Dyke, F. H. Parker; Cibola, Yumlo, R. Hopping; Mesquite, C. C. Searl; Patagonia, J. W. Tilden; Laguna Dam, Yuma County, Werner and Nutting. *Utah:* Washington, D. J. and J. N. Knull.

REMARKS.—In addition to the type there are two specimens in the LeConte Collection that bear the gilt disc for California. All three are yellow-brown beetles with reddish brown to piceous areas on each side of the pronotum; and two specimens have darker sutural edges than the type. In this species the prothorax is nearly as wide as the elytra, and there is an unusually long tooth at the anterior edge of the prothorax under the eye. On the elytra the rows of striate punctures along the side are long and distinct and between are many confused punctures. On the disc the striae are deepset, producing a costate effect. The aedeagus has a long, gradually narrowed tip.

This species occurs in southern California, in the southern part of Utah, and throughout Arizona. It appears also in New Mexico and even in the western counties of Texas in El Paso and Presidio. At first I believed the specimens from Ruidoso, New Mexico (which, as the California specimens, also were collected on *Pluchea serica*), and from El Paso and Presidio, Texas, to be a different species; they seemed to have shorter elytra and a little shorter tip to the aedeagus, but I have come to the conclusion that these more eastern specimens represent a subspecies.

Metachroma californicum anatolicum, new subspecies

TYPE.—Male, USNM 70714, with two paratypes.

TYPE-LOCALITY.—Near Ruidoso, New Mexico (23 September 1943, on *Pluchea sericea* J. M. Russell, collector).

OTHER LOCALITIES.—Texas: El Paso, C. D. Duncan, C. P. Trotter; near Presidio, on *Pluchea serica.*

Metachroma presidiense, new species

FIGURE 35

DESCRIPTION.—Between 4.0 and 6.0 mm in length, elongate oblong oval, shining yellow brown with some-

times a pale reddish brown area on each side of pronotum, pronotum finely and densely punctate, elytra with fine, not-impressed striate punctures.

Head with interocular space approximately half width of head, finely punctate over occiput and front, more coarsely punctate on clypeus, a faint trace of transverse sulcus separating clypeus from front, anterior margin of clypeus widely curved over labrum, a faint median line ending in a depression in middle of front, pale yellow brown with piceous jaws. Prothorax about a third wider than long, nearly as wide as elytra, not very convex with sides not very rounded, sometimes almost straight, a small tooth at each angle, densely and finely punctate, yellow-brown, often with a slightly deeper yellow-brown area on each side. Scutellum yellowish or pale reddish brown. Elytra not quite three times as long as prothorax, narrow and elongate, without depressions except for a short shallow intrahumeral sulcus, smooth, shining yellow brown, sometimes with reddish brown sutural edges, striate punctures fine and closely set, often a little irregular, not at all impressed and becoming a little indistinct at apex, very fine punctures in intervals. Body beneath and legs pale yellow-brown, no tooth on femora, basal claw tooth longer than in *M. californicum*. Length, 4.2–6 mm; width, 2–3 mm.

TYPE.—Male, USNM 70687; with 37 paratypes.

TYPE-LOCALITY.—Near Presidio, Texas, 27 May 1945. (Also, specimens collected at same place, under lights, 9 June 1940.)

REMARKS.—This species is narrower than *M. californicum* Crotch, which it resembles in size and coloring, and the elytral striae are finer and not so impressed. The tooth on the claw is longer and there is no tooth on the femora; the pronotal tooth is not pronounced. So far, no color varieties are known. The aedeagus, with its narrowly pointed tip, is unlike that of any other species of *Metachroma*.

Metachroma occidentale, new species

FIGURE 42

DESCRIPTION.—Between 4.5 and 5.2 mm in length, oblong oval, shining, yellowish brown with deeper reddish brown head and prothorax and sutural edges, often a median dark spot on each elytron or even two spots or a short vitta; elytra with striate punctures distinct to apex, prothorax rather coarsely and densely punctate, femora not toothed.

Head with interocular space a little more than half width of head, front occasionally nearly impunctate but usually densely punctate, punctures never so coarse as on clypeus, anterior margin of clypeus broad and nearly straight over labrum, a faintly depressed median line on front but no transverse sulcus separating clypeus, reddish brown to piceous jaws. Antennae pale, slender, extending below humeri. Prothorax broad and moderately convex with well-rounded sides and tooth at each angle, anterior teeth long; surface lustrous reddish brown, sometimes with deeper brown or piceous areas on each side, densely and moderately coarsely but not confluently punctate, and often with an impunctate median line. Scutellum and sutural edges usually darker reddish brown. Elytra often with a median reddish brown spot or (rarely) two spots, or a short median vitta on each elytron; a faint transverse depression below intrahumeral sulcus; intervals between striate punctures faintly costate, in many specimens the lateral row of striate punctures extending up on inner side of humerus; punctures distinct to apex. Body beneath varying from pale yellow-brown to deep reddish brown; femora not toothed, claws with inner tooth half length of claw. Length, 4.5–5.2 mm; width, 2.2–2.5 mm.

TYPE.—Male, USNM 70686.

TYPE-LOCALITY.—Albuquerque, New Mexico (Wickham collection).

OTHER LOCALITIES.—*New Mexico:* Artesia, D. J. and J. N. Knull; Mesilla, Coolidge, Hot Springs, R. H. Beamer. *Arizona:* Tube City, R. P. Allen; Carrizo Creek, Highway 60, Navajo County, J. W. Green; Patagonia, E. S. Ross; Tucson, Bryant; Wilcox, Bryant, E. D. Ball; Yuma, C. D. Butler; Cochise, R. H. Beamer; Wickenburg, Arnold; Douglas, F. H. Snow; Bill Williams Fork, F. H. Snow. *California:* Needles, Wickham; Coachilla, E. P. Van Duzee.

REMARKS.—This is one of three very similar species, all from Arizona and Southern California. It is not easy to distinguish these three species (*M. occidentale, M. californicum,* and *M. bridwelli,* which hitherto have all gone under the name of *M. californicum*) except by comparison of the aedeagi. *M. californicum* and *M. bridwelli* both have toothed femora, but *M. occidentale* does not. And both *M. californicum* and *M. bridwelli* have a tiny basal tooth on the claw, but *M. occidentale* has the tooth half the length of the claw. In both *M. californicum* and *M. occidentale* there is a long tooth at the anterior angle of the pro-

thorax behind the eye, but this tooth is not so developed in *M. bridwelli.* Unlike the other two species, *M. occidentale* has at times one or two dark median spots or even a short vitta on each elytron. The prothorax is wider and usually more coarsely punctate. The striate punctures are coarse and distinct to the apex, and on the side the punctures of the lateral stria creep up on the inner side of the humerus as in *M. angustulum.* Aside from these small differences, all these species are so much alike that only by examination of the aedeagi can one be really certain of their determination. The aedeagus of *M. occidentale* is similar to that of many of the usually large, broad species of *Metachroma* of which *M. ustum* LeConte is representative. There are only two other species from the southwestern States that have a similar aedeagus—one is *M. suturale* LeConte and the other is a new species that I am describing as *M. longipennis* from the mountains of southern Arizona.

Metachroma bridwelli, new species

FIGURES 37, 39

DESCRIPTION.—From 4.7 to 5.8 mm in length, oblong oval, shining, head and prothorax reddish brown, antennae, elytra, legs and body beneath usually pale yellowish brown, prothorax densely and not very coarsely punctate, with vaguely defined darker areas, elytra with striate punctures distinct to apex, femora toothed, sometimes elytra with sutural edges of varying width dark reddish brown.

Head with interocular space approximately half width of head, occiput and clypeus distinctly punctate, front usually impunctate, often with a median, depressed line, sometimes a faint transverse line separating clypeus, anterior margin of clypeus with half circle of emargination over labrum. Antennae slender, extending below humeri, pale. Prothorax about a third wider than long, convex, with rounded sides and small tooth at each angle, anterior ones longer; finely but distinctly and densely punctate on sides, often with a bare median line and fainter punctures along anterior margin; shining deep reddish brown with deeper brown or piceous areas on each side. Scutellum usually deep reddish brown. Elytra not quite three times as long as prothorax and somewhat wider, paler yellow brown, sometimes with sutural edges deeper brown; striate punctures deeply set and distinct to apex with intervals slightly costate, especially on sides. Body beneath and legs usually yellow-brown, prosternum usually deeper in color. Femora distinctly toothed, claws with tiny basal tooth. Length, 4.7–5.8 mm; width, 2.0–2.5 mm.

TYPE.—Male, USNM 70689. Twenty paratypes in USNM.

TYPE-LOCALITY.—Meloland, Imperial Valley, California (June 1912; J. C. Bridwell, collector).

OTHER LOCALITIES.—*California:* Pasadena, Ralph Hopping; Loma Linda, G. H. Nelson; Imperial County, G. H. Field; Coachilla, E. P. Van Duzee. *Arizona:* Phoenix, D. K. Duncan, H. W. Wenzel; Tempe, L. J. Hogg, F. G. Werner. Gillespie Dam, Gila Bend, at 1,000 feet, F. Werner, W. Nutting; Patagonia, P. H. Johnson; Yuma, Arrizo and Tuttle. *Nevada:* Las Vegas, D. J. and J. N. Knull. *Mexico:* Mexicale, on zinnia; near San Jose Beach, 40 miles southwest of Obregon, Sonora, Howden and Martin.

REMARKS.—This species so resembles *M. californicum* as to be nearly indistinguishable except by dissecting for the aedeagus. The prothorax in *M. californicum* is proportionately wider in many specimens. J. C. Bridwell collected a large number of these beetles in Meloland, California; many of these still remain unmounted, and there are specimens of *M. californicum* among them. As for the range, this species so far has been collected only in extreme southern California, in Arizona, and in the southern part of Nevada. One specimen has been collected in Sonora, Mexico (rather far south, near Sinaloa), and the species may be an essentially Mexican one.

Metachroma nigrosignatum, new species

FIGURE 46

DESCRIPTION.—From 4.0 to 5.0 mm in length, elongate oblong oval, shining, head and prothorax deep reddish brown, the latter often piceous or with piceous areas on each side, elytra yellow-brown with piceous areas in apical half, sometimes almost covering elytra except at base; punctation on prothorax dense and deep but not coarse, usually with an impunctate median area, on elytra striate punctures fine and closely set, fading at apex but enlarged in transverse depression, some costate ridging on sides, femora toothed.

Head with interocular space approximately half width of head, strongly punctate throughout with clypeus more so and often rugose; no transverse sulcus

between front and clypeus, a median linear depression on front; varying in color from reddish brown to piceous. Antennae slender, extending below humeri, pale yellow-brown. Prothorax about a third wider than long, not very convex, with rounded sides and a small tooth at each angle, densely and deeply but not coarsely punctate, often with a median impunctate area; deep reddish brown with darker, often piceous areas on each side, or entirely piceous. Scutellum reddish brown. Elytra more than twice as long as prothorax and not much wider, elongate, with a transverse depression below basal umbone; rows of striate punctures fine and closely set, coarser in transverse depression and on sides, on sides somewhat confused and with costate ridging; color variable, basal portion more or less yellow-brown but apical half with piceous markings variable in extent. Body beneath piceous, legs yellow-brown, often with apex of femora dark-ringed, all femora toothed, claws appear simple but there is a very tiny inconspicuous tooth at base. Length, 4–5 mm; width, 1.7–2.3 mm.

TYPE.—Male, in CAS. Six paratypes in CAS; three paratypes in USNM.

TYPE-LOCALITY.—Poso Creek, Kern County, California (5 June 1929, E. P. Van Duzee, collector).

REMARKS.—Although the aedeagus resembles that of *M. californicum* Crotch, this species is more slender and has a dark prothorax, dark markings on most of the elytra, and dark undersurface. The tooth at the anterior angle of the prothorax is not conspicuous as in *M. californicum*.

Metachroma longipennis, new species

FIGURE 38

DESCRIPTION.—Between 5.4 and 6.0 mm in length, narrowly elongate oblong oval, shining, prothorax narrow and convex, about a third as long as elytra, finely punctate, elytra elongate with fine striate punctures somewhat confused near base and becoming faint at apex, head and prothorax reddish brown, elytra, abdomen and legs yellowish brown.

Head with interocular space half width of head, deep reddish brown with piceous jaws, shining, covered with dense punctures that are coarser on clypeus, no transverse sulcus between front and clypeus, clypeus with anterior margin nearly straight over labrum. Antennae slender, extending below humeri, yellow-brown. Prothorax about a third wider than long, narrow and strongly convex, not as wide as elytra and about third as long, with only slightly rounded sides and a tooth at each angle, anterior teeth rather conspicuous; surface shining deep reddish brown, finely and moderately densely punctate. Scutellum yellowish or reddish brown. Elytra elongate with prominent humeri and fine striate punctures that are sometimes irregular about scutellum and intrahumeral sulcus and become dense and confused on sides, one stria on side continuing up on inner side of humerus as in *M. angustulum;* punctures tend to fade away towards apex. Body beneath with legs and abdomen yellow-brown, rest deeper brown. Length, 5.4–6.0 mm; width, 2.4–2.7 mm.

TYPE.—Male, in CAS. Nine paratypes in CAS; six paratypes in USNM; eighteen paratypes in AMNH.

TYPE-LOCALITY.—Southwest Arizona, research station, 5 miles west of Portal, Chiricahua Mountains, Cochise County, at 5,400 feet (15 June 1958, C. D. MacNeill; 8 June 1958, W. J. and J. W. Gertsch; 25 May 1958, M. A. Cazier).

OTHER LOCALITIES.—*Arizona*: Sierra Vista, Huachuca Mountains, R. F. Sternitzky; Huachuca Mountains, D. K. Duncan; Pinal Mountains, Gila County, D. K. Duncan; Madera County, Santa Rita Mountains, at 5,000 feet, F. G. Werner; South Fork Camp, Cave Creek Canyon, Chiricahua Mountains, Cochise County, at 5,500 feet.

REMARKS.—In its narrow elongate shape this species resembles *M. angustulum* Crotch, but it has a more convex prothorax with nearly straight sides. In both species the elytral punctation is fine and rather irregularly striate, and the lateral stria, as in *M. angustulum*, continues up the inner side of the humerus. I have not seen any color variation such as is common in *M. angustulum* in *M. longipennis*. So far, this species has been collected only in the mountains of southern Arizona from Gila County south to Cochise County at an altitude of about 5,000 feet.

Metachroma longulum Horn

FIGURES 47, 49, 50, 51

Metachroma longulum Horn, 1892, p. 212.
Metachroma novemstriatum Schaeffer, 1919, p. 328.
Metachroma opacipenne Fall, 1927, p. 138.

DESCRIPTION.—From 3.4 to 4.7 mm in length, elongate oblong oval, shining, prothorax unusually convex, deep reddish brown usually with darker areas

on each side, distinctly and densely punctate, elytra somewhat paler yellowish or reddish brown usually with from two to four reddish brown or piceous spots sometimes coalescing to form a dark vitta or widening to join suture, sutural edges often dark, striate punctures deeply impressed with somewhat costate intervals, especially on sides.

Head with interocular space approximately half width of head, base of occiput punctate, front sometimes nearly smooth but often coarsely and densely punctate, shining, front not separated from clypeus by transverse groove, clypeus usually more densely punctate, anterior margin with small emargination over labrum; a faint median line down front; yellowish or reddish brown with darker jaws. Antennae pale yellow or reddish brown, extending below humeri. Prothorax unusually convex, with slightly rounded sides, about a third wider than long, shining deep reddish brown, usually with darker brown or piceous area on each side, densely and often coarsely punctate, punctures on sides being denser and coarser and often with a median impunctate line. Scutellum dark reddish brown. Elytra a little more than twice as long as prothorax and not much wider, shining, sometimes without spots but usually paler than prothorax with, on each elytron, two deep brown or piceous median spots (one before and one after the middle) or sometimes only one spot, and occasionally in darker specimens spots coalesce to form a short median vitta and sometimes a wide dark area covering most of elytra, usually sutural edges dark. Striate punctures deeply impressed in basal half and on sides, making intervals appear costate. Body beneath reddish brown or piceous, legs paler, hind femora with minute tooth; claws appear simple. Length, 3.4–4.7 mm; width, 1.5–2.5 mm.

TYPE.—Of *longulum* Horn in Horn collection, PAS; of *novemstriatum* Schaeffer in USNM; of *opacipenne* Fall in Fall collection, MCZ.

TYPE-LOCALITIES.—Arizona (*longulum* Horn); Lower California (*novemstriatum* Schaeffer); Santa Rosa, Lower California (*opacipenne* Fall).

OTHER LOCALITIES.—*Texas:* El Paso. *Arizona:* Gila Bend, Wickham; Winslow, Barber and Schwarz; Gillespie Dam, E. P. Van Duzee, F. Werner, W. Nutting; Holbrook, F. H. Parker; Tucson, R. A. Flock; Gila Valley, F. H. Parker. *Colorado:* La Junta. *Wyoming:* Rock Spring, O. Bryant. *Lower California:* San Domingo; Mesquital; 20 miles south of Coyote Cave, Conception Bay, 10 miles south of Catavina, and 12 miles south of Santa Rosalia, all collected by Michelbacher and Ross. *Mexico:* Desemboque, Sonora, B. Malkin.

REMARKS.—There are no specimens of *M. longulum* Horn in Fall's collection, and he could not have been acquainted with the species when he described *opacipenne* from a single specimen. The type-specimens of both *opacipenne* Fall and *novemstriatum* Schaeffer as well as a large number of specimens (collected by Michelbacher and Ross also in Lower California) in the California Academy of Sciences are all, without a doubt, a single species (Horn's *longulum*), although they show the usual wide variation in color markings and even in the aedeagus. In general, the specimens from Lower California are a little larger than those from Arizona that I have examined, and in some (but not all) the head is more coarsely and densely punctate. Specimens vary from being entirely yellowish or reddish brown without dark markings to having the elytra with two and four spots. I have not seen specimens from California, but these beetles have been taken in El Paso, Texas; Sonora, Mexico; Lower California; Arizona; Colorado; and Wyoming. The species is characterized by its long, convex, and densely punctate prothorax and by elytra that are a little more than twice as long as prothorax and with deeply impressed punctures in the basal half. The aedeagus has a long narrow tip which shows considerable variation in the length of the narrowing.

Metachroma immaculatum, new species

FIGURES 44, 45

DESCRIPTION.—From 3.3 to 4.4 mm in length, elongate oblong oval, shining, head and prothorax reddish brown, elytra paler yellowish brown, prothorax strongly convex, finely punctate, elytra with striate punctures not impressed and fading away at apex.

Head with interocular space approximately half width of head, occiput often punctate but front smoother, clypeus, which is not separated from front by a transverse sulcus, distinctly and densely punctate, sometimes a faint median line on front. Antennae extending below humeri, pale yellow-brown. Prothorax not a third wider than long, convex, with rounded sides,

a tiny tooth at each angle, surface finely and densely punctate, deep reddish brown. Scutellum reddish brown. Elytra more than twice as long as prothorax, usually paler yellowish or reddish brown, moderately convex with small humeri, a short intrahumeral sulcus and faint trace of transverse depression below; striate punctures fine, regular, and becoming faint at apex, not at all impressed except on sides where intervals are somewhat costate. Body beneath shining reddish brown with abdomen usually paler yellowish brown. Femora minutely toothed; claws simple. Length, 3.3–4.4 mm; width, 1.7–2.2 mm.

TYPE.—Male, USNM 70690. Five paratypes in USNM; six paratypes at UI.

TYPE-LOCALITY.—Six miles northeast of Malta, Cassia County, Idaho (W. F. Barr, collector).

OTHER LOCALITIES.—*Lower California:* San Fernando, Michelbacher and Ross. *Nevada:* Reno, F. E. Blaisdell. *California:* Bishop, Inyo County. *Arizona:* Winslow, Wickam. *Utah:* Logan. *Idaho:* Nampa, Canyon County, W. F. Barr; Idahome, Cassia County, W. F. Barr; Given Springs, R. W. Haegele.

REMARKS.—Horn, in his description of *M. longulum,* mentions one specimen as different from the other examples in not having the elytral striae impressed and in not having the abdomen "rufescent." He wrote that these differences "doubtless indicate a true species but from the already known variability of others, I propose to pass it with this note till others appear." Horn probably had a specimen of this species before him. Like Horn, I am not certain whether these differences really constitute a species different from *M. longulum;* but I am describing this species as new on the basis of the more finely punctate pronotum, the finer, less-impressed elytral punctation, the lack of any dark markings above, and the paler undersurface. In *M. longulum* the aedeagus has a long pointed tip that varies somewhat in the length of the narrowed end. In *M. immaculatum* the narrowed end is very much shorter. The range of this new species is similar to that of *M. longulum* except that it has been collected in eastern California (Inyo County). It occurs also in Lower California, Arizona, Nevada, Utah, and Idaho. In a series of 25 specimens from Idaho there is not one specimen with any dark markings on the prothorax or elytra. This lack of dark markings also holds in the case of the rest of the specimens examined among which is no series as large as the one from Idaho.

Metachroma septentrionale, new species

FIGURE 43

DESCRIPTION.—From 4.0 to 5 mm in length, elongate oblong oval, not very convex, shining yellow-brown, prothorax densely and distinctly punctate on sides, usually with a bare median impunctate area, elytra with striate punctures slightly impressed in basal half, becoming very faint at apex.

Head with interocular space approximately half width of head, occiput and front smoothly rounded with a faint trace of transverse groove separating clypeus, obsoletely and finely punctate, clypeus densely and moderately coarsely punctate, yellow brown with jaws piceous. Antennae entirely pale yellow brown. Prothorax a third wider than long with rounded sides and the usual tooth at each angle, not so convex as in *M. longulum* or *M. immaculatum,* surface shining deep yellowish brown, densely and distinctly but not coarsely punctate on sides, with a bare median area, punctures finer anteriorly and posteriorly. Scutellum pale. Elytra more than twice as long as and not much wider than prothorax, with small humeri and short intrahumeral sulcus, paler yellow-brown than prothorax, shining, striate punctures close-set, not coarse, and fading away towards apex, in basal half somewhat impressed, especially on sides and in the slight transverse depression. Body beneath yellow-brown; claws with a tiny basal tooth. Length, 4.0–5.0 mm; width, 1.7–2.2 mm.

TYPE.—Male, in MCZ. One paratype in MCZ, one paratype at UK, and one paratype in USNM.

TYPE-LOCALITY.—Amedee, California, at 4,200 feet (Wickham collection).

REMARKS.—This species is very closely related to *M. immaculatum* from Idaho, southern Utah, Arizona, and Lower California. Specimens of both species are small, narrowly elongate, and without dark markings. There is little to differentiate them except that *M. septentrionale* is not so convex, the elytral punctures at base are more deeply impressed, and the claws have a small basal tooth, unlike *M. immaculatum.* The wide difference in the localities of the two species, however, is the strongest point for separating them. *Metachroma septentrionale* was collected at an altitude of 4,200 feet in the northern Sierras of California.

Metachroma utahense, new species

FIGURE 52

DESCRIPTION.—Between 3.8 and 4.8 mm in length, elongate oblong oval, shining yellowish brown with the pronotum, scutellum, and sometimes sutural edges deeper orange-brown; pronotum not very convex, finely punctate, elytra with rows of striate punctures not distinct below middle.

Head with interocular space more than half its width, base of occiput and sometimes clypeus finely punctate, otherwise tending to be smooth, polished yellow-brown without a transverse sulcus separating clypeus and with a short median linear depression on front; anterior margin of clypeus with small emargination over labrum. Antennae extending below humeri, yellow-brown. Prothorax not twice as wide as long and not very convex but rather flat, with rounded sides and small tooth at each angle, surface finely punctate and lustrous orange-yellow brown. Scutellum deep yellow-brown. Elytra not three times as long as prothorax, a slight transverse depression below intrahumeral sulcus, rows of striate punctures fine, especially over basal umbone, and not very distinct after middle. Body beneath and legs pale yellow-brown; claws with short basal tooth. Length, 3.8–4.8 mm; width, 1.8–2.4 mm.

TYPE.—Male, in CAS. One paratype in CAS; two paratypes in USNM.

TYPE-LOCALITY.—Washington County, southwestern Utah (C. C. Searl, collector).

OTHER LOCALITY.—St. George, Utah, Wickham (MCZ).

REMARKS.—This species is similar to pale forms of *M. laevicollis,* an eastern species. Like that species the elytral punctation is fine and indistinct towards the apex but, unlike most specimens of *M. laevicollis,* the pronotum is distinctly and rather densely punctate and the aedeagus is entirely different in having a long pointed tip. Unlike *M. longulum,* the prothorax is not very convex.

Metachroma coronadense Fall

FIGURES 53, 54

Metachroma coronadense Fall, 1927, p. 138.

DESCRIPTION.—Between 3.4 and 4.3 mm in length, oblong oval, lustrous reddish or deep yellowish brown with margins, sutural edges, and apical joints of antennae deeper reddish brown and body beneath and jaws nearly piceous; head and pronotum finely punctate; elytra with straight lines of striate punctures, moderately coarse, close-set and distinct to apex; in female elytral intervals on sides and three on disc strongly costate in basal half.

Head with interocular space half width of head, smooth, lustrous, very finely and sparsely punctate with a more or less well-marked median line down front, no trace of transverse sulcus, clypeus with more punctures than front, anterior margin over labrum nearly straight, only slightly emarginate. Antennae with outer joints wider and frequently darker. Prothorax a little less than half as long as elytra and nearly as wide, with arcuate sides and prominent tooth anteriorly and less so at base, not very convex, polished, finely punctate except along base and often an impunctate median line, bright reddish brown or orange-brown with very slightly darker areas on each side, often scarcely perceptible, margins deep reddish brown. Scutellum reddish brown. Elytra slightly paler yellowish brown but frequently with dark reddish brown sutural edges, rows of punctures moderately coarse and nearly straight, distinct to apex, on sides three long striae; in female strongly costate intervals which are not developed in male, a costa opposite humeral prominences and two lesser costae not extending far down elytra on disc, and on side three long costate intervals, the first from humerus down; in the type-specimen and in several other specimens a slight irregularity in the punctures between fourth and fifth striae. Body beneath varying from deep reddish brown to piceous, abdomen being darker. Femora minutely toothed; claws with short basal tooth. Length, 3.4–4.3 mm; width, 1.7–2.2 mm.

TYPE.—Male, in Fall collection, MCZ.

TYPE-LOCALITY.—Coronado, California (19 April 1891).

OTHER LOCALITIES.—*California:* San Diego County, F. E. Blaisdell. *Mexico:* San Blas, Nayarit, 19 June 1956, R. Pallen; 17–21 September 1953, B. Malkin; 24–26 April, Howden and Martin.

REMARKS.—Fall's type, the only specimen of the species in his collection, is a male. In the California Academy of Sciences are one male and three females (also from San Diego County) that I believe are Fall's species. The male is very much like *M. texanum* Schaeffer, an eastern species, both in size and in the straight rows of elytral striation, although *M. texanum* has a darker reddish brown prothorax. But in the fe-

male there is no similarity between the two species, since in the female of *M. coronadense* are strong elytral costate intervals both on sides and on disc in basal half. Also in the collection of the California Academy of Sciences are three females from San Blas, Nayarit, Mexico, that appear to be this species; all three have strong elytral costae. In the Canadian National Collection is a series of 17 specimens from San Blas collected by Howden and Martin. These specimens probably represent a Mexican species that crosses the border into southern California. Another Mexican species is represented by two females from Tepic, Nayarit, in which there is a strong lateral costa in the female, together with two smaller costate intervals on the disc, but in that species, which I have named *M. bimarginatum*, the elytral striate punctures, while coarse and dense in the basal half of the elytra, completely fade out in the apical half. That species has much more darkly marked elytra and a 4-spotted pronotum.

Metachroma quadrimaculatum Jacoby

FIGURES 57, 59

Metachroma quadrimaculata Jacoby, 1891, p. 235.

DESCRIPTION.—Approximately 3.7–4.6 mm in length, oblong oval, shining, pronotum finely and sparsely punctate, elytra with striate punctures not distinct to apex, yellow-brown, pronotum with from two to four spots, often an occipital dark spot, elytra with one or two median spots on each elytron.

Head with interocular space more than half width of head, usually finely and not densely punctate over front and more coarsely and densely punctate on clypeus, no transverse sulcus dividing front and clypeus, clypeus with a very slight emargination over labrum, often a depressed line on front, yellow-brown, usually with a dark occipital spot. Antennae extending below humeri, distal joints tending to be darker. Prothorax broad but not twice as wide as long, with arcuate sides and small tooth at each angle, not very convex, yellow-brown, usually with four piceous spots, the middle ones elongate, often outer spots or even all spots missing, finely and sparsely punctate, although sometimes more coarsely and densely punctate. Scutellum reddish brown. Elytra not three times as long as prothorax, with prominent humeri and slightly costate intervals between striae near base and on sides, a faint transverse depression below basal callosity, striate punctures moderately fine, becoming obsolete on sides and at apex, shining pale yellowish brown with sutural edges tending to be deep reddish brown and usually on each elytron two piceous vittate spots, sometimes reduced to one or entirely missing, or enlarged to form a median vitta. Body beneath and legs pale yellow-brown, femora with minute tooth; claws with tooth nearly half as long as claw. Length, 3.7–4.6 mm; width, 2.0–2.5 mm.

TYPE.—In BMNH.

TYPE-LOCALITY.—Cuernavaca, Mexico (H. H. Smith, collector).

OTHER LOCALITIES.—*Mexico:* Atlixco, A. Fenyes; Cuernavaca, A. Fenyes. *Arizona:* Tucson, E. P. Van Duzee, J. N. Knull; Sabino Canyon, D. J. and J. N. Knull; Tex Canyon, Cochise County, Chiricahua Mountains, J. A. Kirsche; Nogales, D. J. and J. N. Knull; St. Xavier Mountain, Tucson, E. P. Van Duzee.

REMARKS.—A cotype from Cuernavaca (H. S. Smith, collector) that was sent to me from the British Museum (Natural History) has markings similar to the one figured here from Nogales, Arizona, except that the humeri in the Mexican specimen are slightly darkened. But the Mexican specimen, unlike the Nogales one, has a polished, almost impunctate pronotum. The other figured specimen, from Washington Mountains, near Nogales, has very finely punctate pronotum. Not only does the sculpture vary thus, but the markings vary too. As in a series of typically marked specimens from Sabino Canyon, Arizona, there are two without any dark markings whatsoever on the elytra and only faint traces of the four pronotal spots. One specimen in a series from Atlixco, Mexico, has no dark markings on head, pronotum, or elytra.

There are at least four species of *Metachroma* from Mexico with a 4-spotted pronotum similar to that of *quadrimaculatum*. The only certain way of distinguishing this very variable species from the other three is to dissect a male for the aedeagus. Jacoby writes that the elytra of *quadrimaculatum* are more finely punctate than in *M. ornatum* Jacoby.

Metachroma sandersoni, new species

FIGURE 48

DESCRIPTION.—Approximately 5 mm in length, elongate oblong oval, shining, head and prothorax deep reddish brown, rest of beetle yellowish brown; pro-

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thorax on sides densely and coarsely punctate, elytra with rows of striate punctures becoming faint after middle, front and hind femora minutely toothed.

Head with interocular space approximately half width of head, front and occiput rather obsoletely punctate with a median linear depression and a trace of sulcus dividing it from clypeus, clypeus coarsely punctate, anterior margin emarginate over labrum, jaws piceous. Antennae missing. Prothorax about a third wider than long, rather flat, with rounded sides and a small tooth at each angle, shining deep reddish brown with dense coarse punctures on sides becoming finer anteriorly and with a median impunctate line. Scutellum reddish brown. Elytra paler yellowish brown, approximately three times as long as prothorax (in male), with regular striate punctures becoming indistinct after the middle, on sides with somewhat costate intervals; humeri well developed and with intrahumeral sulcus and a slight basal umbone with transverse depression below. Body beneath entirely pale, front and hind femora with small tooth; claws with a minute basal tooth. Length, 4.9 mm; width, 2.0 mm.

TYPE.—Male, at UK.

TYPE-LOCALITY.—Bliss, Idaho (M. W. Sanderson, collector, 7 July 1931).

REMARKS.—This is one of the few species of the genus found in the northwestern states, in this instance in the southwest corner of Idaho on the Snake River. Only one specimen is known. The chief characters of the beetle are the shape of the aedeagus with its long narrow tip, the toothed femora, and the claws with the minute basal tooth.

Metachroma montanense, new species

FIGURE 58

DESCRIPTION.—Length, 3.0 mm; narrowly oblong oval, shining, pale yellow-brown with head, prothorax, and apical joints of antennae deeper reddish brown; prothorax densely but not coarsely punctate, elytra with regular rows of striate punctures becoming less distinct towards apex.

Head with interocular space a little more than half width of head, a faint, short orbital groove above antennal sockets, eyes appearing entire and not emarginate; surface smooth, shining, without depressions or transverse sulcus, finely and shallowly punctate, slightly coarser on clypeus, anterior margin over labrum nearly straight, mouthparts dark. Antennae extending below humeri, outer joints deeper brown and wider. Prothorax nearly as long as wide, strongly convex with slightly rounded sides, with a small tooth at each angle, densely punctate, punctures somewhat coarser near lateral margin, a short impunctate median line, shining reddish brown. Scutellum reddish brown. Elytra a little over twice as long as prothorax, convex, with only a short, intrahumeral sulcus, no other depressions, striate punctures regular, on sides with a tendency to being deeply impressed, with intervals somewhat costate, and with many confused punctures, entirely yellowish brown. Body beneath yellowish brown. Length, 3 mm; width, 1.6 mm.

TYPE.—Female, USNM 70688 (from Chittenden collection).

TYPE-LOCALITY.—Montana.

REMARKS.—The type, a female, is the only known specimen of this species, and the locality on the label is simply "Montana." Chittenden identified this specimen as *M. aeneicollis* Horn, and it does appear to be in the group with that species. The eyes appear entire and not at all emarginate, and there is only a short orbital groove above the antennal socket; the antennae, too, are unusually short. This specimen is larger than any in the *longicollis* group, and instead of being piceous is yellowish brown with reddish brown head and prothorax. It is unfortunate that no male specimen is known.

Key to Species from Mexico and Central America

1. Elytra with remnants of striate punctation visible chiefly in transverse depression near base 2
   Elytra with striate punctation visible after middle 5
2. Interocular space less than half width of head. (Quintana Roo) ..... ***M. lucidum***, new species
   Interocular space more than half or half width of head 3
3. Interocular space more than half width of head ..... ***M. mexicanum*** Jacoby
   Interocular space half width of head 4
4. Surface of pronotum punctate ..... ***M. guatemalense*** Jacoby
   Surface of pronotum impunctate ..... ***M. costaricanum*** Bechyne

5. Pronotum with from two to four transverse dark spots 6
   Pronotum without dark spots 10
6. Elytra more or less costate 7
   Elytra not costate 8
7. Elytral striate punctures not distinct to apex. (Mexico) ..... *M. bimarginatum*, new species
   Elytral striate punctures distinct to apex. (Mexico) ..... *M. bipunctatum* Jacoby
8. Prothorax twice as wide as long. (Mexico) ..... *M. ornatum* Jacoby
   Prothorax not twice as wide as long 9
9. Elytra without well-marked intrahumeral sulcus or transverse depression ..... *M. panamense*, new species
   Elytra with well-marked intrahumeral sulcus and transverse depression. (Yucatan Peninsula) ..... *M. clarkei*, new species
10. Upper surface with fine pubescence either on pronotum or over whole beetle 11
    Upper surface not at all pubescent 12
11. Pronotum with short yellow hairs visible only when viewed from side. (Baja California) ..... *M. peninsulare* Crotch
    Whole upper surface with fine pale pubescence. (Sonora) ..... *M. hirsutum*, new species
12. Elytra with striate punctures visible entire length 13
    Elytra with striate punctures not visible entire length 16
13. Length, 4 mm or more; elytra distinctly costate ..... *M. ignotum*, new species
    Length, 2.5 to 3.4 mm; elytra not costate 14
14. Elytra three times as long as prothorax. (British Honduras) ..... *M. minutum* Jacoby
    Elytra not three time as long as prothorax 15
15. Elytra more than twice as long as prothorax ..... *M. longicollis* Jacoby
    Elytra about twice as long as prothorax. (Salvador, Nicaragua) ..... *M. vittipennis*, new species
16. Length less than 4 mm 17
    Length 4 mm or more 18
17. Prothorax piceous and densely punctate. (Mexico) ..... *M. nigricollis*, new species
    Prothorax either pale or with dark spot. (Mexico) ..... *M. mutabile*, new species
18. Elytra twice as long as prothorax. (Angel de las Guarda Island, Gulf of California) ..... *M. insulare* Fall
    Elytra more than twice as long as prothorax 19
19. Elytra not depressed, with rows of punctures nearly straight. (Nicaragua; Costa Rica) ..... *M. convexum* Jacoby
    Elytra with the usual intrahumeral sulcus depression and transverse depression 20
20. Prothorax rather flat, a short basal tooth on claws. (Quintana Roo) ..... *M. quintanae*, new species
    Prothorax convex, with long tooth on claws 21
21. Elytra usually with spots or other dark markings. (British Honduras) ..... *M. inconstans*, new species
    Elytra usually without dark markings 22
22. Striate punctures, although faint, apparent at apex. (Mexico) ..... *M. regulare* Jacoby
    Striate punctation fading away at apex. (Mexico) 23
23. Large, 5.5 mm or more in length. (Mexico; British Honduras; Guatemala) ..... *M. variabile* Jacoby
    Smaller, 4.5 mm in length. (Panama) ..... *M. vulgare*, new species

Metachroma variabile Jacoby

FIGURE 60

Metachroma variabile Jacoby, 1882, p. 170; 1891, p. 233.

DESCRIPTION.—About 5.5 mm in length, broadly oblong oval, lustrous deep reddish brown, prothorax impunctate, elytra with regular striate punctures becoming finer after the middle, femora toothed.

Head with interocular space half width of head, front impunctate, polished, a median linear depression, trace of transverse sulcus dividing front from clypeus, the latter more alutaceous and finely punctate, jaws piceous. Antennae long and slender, outer joints darker. Prothorax not twice as wide as long, moderately convex with rounded sides, deep dark reddish brown, lustrous, impunctate. Scutellum reddish brown, polished. Elytra not three times as long as prothorax,

convex with short intrahumeral sulcus and transverse depression below basal umbone, striate punctation regular and enlarged in transverse depression, but fading away towards apex; surface very shiny, deep reddish brown. Body beneath dark reddish brown, legs a little paler, femora toothed, claws with long tooth. Length, 5.5 mm; width 2.7 mm.

TYPE.—In BMNH. Cotype in Bowditch collection MCZ.

TYPE-LOCALITY.—Rio Hondo, British Honduras (Blancaneaux, collector).

OTHER LOCALITIES.—*Guatemala:* Zapote, Dueñas, La Tinta, Capetillo, Mirandella, Pantaleon (Champion, collector). *Mexico:* Tapachula, Chiapas (Höge, collector).

REMARKS.—In the Bowditch collection is a female specimen from Rio Hondo, British Honduras that has a deep brown, almost piceous prothorax and elytra, the latter a bit paler at the apex. The pronotum is nearly impunctate. Also, there are seven specimens from Tapachula, Chiapas, mentioned by Jacoby (1891). These specimens show a wide color range—from the prothorax being simply brown to piceous and and the elytra from being without markings to having a darker median area. The Zapote, San Miguel, and San Juan Bautista specimens in the Bowditch collection are all yellow-brown with polished, almost impunctate pronotum. There is great variation in size.

Jacoby (1891) writes that "it is possible that *M. regularis* may be only a variety of *M. variabilis.*" He bases this suspicion on the fact that some specimens of what he considers *variabile* do have "extremely fine punctation visible on the thorax." As stated under my discussion of *M. ustum* LeConte, this is also the case with that species, which is so close to *M. variabile* that I believe they are the same species. The aedeagi of all specimens that I have examined appear to be much the same in both. The type of *M. ustum* has a distinctly but finely punctate pronotum although other specimens are as smooth and nearly impunctate as *M. variabile.*

Metachroma regulare Jacoby

FIGURES 62, 63

Metachroma regularis Jacoby, 1882, p. 170.

DESCRIPTION.—Between 6.5 and 7.0 mm in length, broadly oblong oval, lustrous, head, prothorax and body beneath deep reddish brown, elytra and legs usually more yellowish; apical joints of antennae tending to be darker; pronotum with very fine punctures, elytra with striate rows of punctures fading at apex, femora toothed.

Head with interocular space approximately half width of head, coarsely punctate at base of occiput, obsoletely so below that, with clypeus tending to be alutaceous and coarsely punctate, no transverse sulcus dividing front from clypeus, latter with anterior margin widely and shallowly emarginate; reddish brown with piceous jaws. Antennae extending below humeri, often distal joints darker. Prothorax convex with rounded sides, lustrous deep reddish brown with fine punctures, a small tooth at each angle. Scutellum dark reddish brown. Elytra convex with short intrahumeral sulcus and only faint depression below basal umbone, striate punctures regular, moderately coarse and strongly impressed, the rows on the side being distinct and moderately coarse, fading away in apical half but still apparent. Body beneath deep reddish brown, almost piceous in middle, legs paler, femora toothed. Claws with long tooth. Length, 6.5–7.0 mm; width, 2.8–3.1 mm.

TYPE.—In BMNH. Cotype in Bowditch collection, MCZ.

TYPE-LOCALITY.—Playa Vicente, Mexico (Höge, collector).

REMARKS.—The specimen here illustrated, a cotype of *M. regulare* from Playa Vicente, agrees in size, color, and punctation with a female specimen (in CAS) from Estero de Saigente, Sonora, Mexico. The only difference that I can find between *M. ustum* LeConte and *M. regulare* Jacoby is that the Mexican specimens generally are larger and the elytral punctures are more deeply impressed and usually coarser and apparent to the apex. The aedeagus is similar in the two species. In the Bowditch collection are three specimens of the type series collected by Höge at Playa Vicente; all measure from 6.5 to 7 mm in length. Jacoby had some doubts about *M. regulare* being distinct from *M. variabile* since he wrote that *regulare* "may be only a variety" (Jacoby, 1891).

Metachroma vulgare, new species

FIGURE 83

DESCRIPTION.—About 4.5 mm in length, broadly oblong oval, shining, deep yellowish brown with

antennae having 6th, 7th, and sometimes apical joints dark; head and prothorax nearly impunctate, elytra with striate punctures at apex evanescent.

Head with interocular space half width of head, no transverse sulcus separating clypeus, the surface of which is somewhat duller alutaceous and more distinctly punctate than front, with anterior margin curved above labrum, jaws piceous; front with a small median depression, nearly smooth without punctures. Antennae extending below humeri, with 6th, 7th, and often apical joints dark. Prothorax approximately a fourth wider than long, with well-rounded sides and conspicuous tooth at each angle, not very convex, surface deep shining yellowish brown with margins reddish brown, minutely punctate. Scutellum yellowish or reddish brown. Elytra not three times as long as prothorax and not much wider, smoothly convex with only slight intrahumeral sulcus and faint trace of transverse depression below; striate punctures not closely set but regular and distinct in basal half, becoming less impressed after middle and vanishing entirely at apex. Body beneath and legs yellowish or reddish brown, femora toothed, claws with long basal tooth. Length, 4.5 mm; width, 2.3 mm.

TYPE.—Male USNM 70693, with one paratype.

TYPE-LOCALITY.—"In bananas from Panama" taken at San Francisco, California (17 September 1931).

REMARKS.—This is another species belonging to the *M. ustum* LeConte, *M. variabile* Jacoby, and *M. regulare* Jacoby group that ranges from Texas southward through Mexico and Central America and is represented in South America by *M. venezuelense* Bechyne and *M. labrale* Blair from Galapagos Islands. There are also closely related species from the various islands of the West Indies. Their aedeagi, while differing slightly, are all similar. Whether they are all specifically distinct is hard to determine. In the present species the aedeagus appears wider than in most others.

Metachroma inconstans, new species

FIGURES 78, 79

DESCRIPTION.—Approximately 5 mm in length, oblong oval, shining, yellowish to reddish brown, often with piceous prothorax and piceous elytral spots or short vittae; prothorax almost impunctate, elytra with coarse, deep-set, striate punctures becoming faint at apex.

Head with interocular space not quite half width of head, a faint trace of line separating front from clypeus, clypeus alutaceous and finely punctate with anterior margin widely and shallowly curved over labrum, front shining, nearly impunctate, sometimes with a median line. Antennae slender, with 6th and 7th joints sometimes dark and joints 6–11 usually dark. Prothorax strongly convex with well-rounded sides and tooth at each angle; surface mirror-smooth, lustrous deep reddish brown to piceous. Scutellum yellowish to deep piceous. Elytra not three times as long as prothorax and somewhat wider, convex, with short but deep intrahumeral sulcus and a faint transverse depression below this sulcus; rows of striate punctures deeply set and coarse in basal half, gradually becoming smaller and faint at apex; color variable, some specimens being entirely yellowish or reddish brown without markings, and others with sutural edges dark and a dark elongate spot in middle of base and another below intrahumeral sulcus and another in the middle in basal half, sometimes these spots widening to cover most of middle of disc, in these dark specimens the body beneath dark and femora with dark ring at apical constriction, pale specimens usually with deeper reddish brown prosternum and breast often deeper in color. Hind femora with small tooth; claws with long tooth. Length, 4.7–5.2 mm; width, 2.4–2.6 mm.

TYPE.—Female, in MCZ. Four paratypes in MCZ; two paratypes in USNM.

TYPE-LOCALITY.—"M–tee Dist." (?Manatee), British Honduras (January–February 1906).

REMARKS.—This new species is very close to *M. variabile* Jacoby and *M. ustum* LeConte (which I am unable to separate). In fact, the chief point in with it differs from those two species is in the pattern of the elytral markings in darker specimens. In a series of seven specimens, all from the same place, only one specimen is entirely pale and the elytra without spots or other markings. In both *M. variabile* and *M. ustum* dark markings are rare, and when such a marking does occur it is a median short vitta on the elytra or a rather pale reddish brown widening about the sutural edges. The elytral punctation in this species appears a little more deeply impressed and coarser than in *M. variabile* and *M. ustum;* the intrahumeral sulcus

also is deeper cut; and the aedeagus, while of the same shape, is narrower.

Metachroma convexum Jacoby

FIGURES 82, 84

Metachroma convexa Jacoby, 1882, p. 171.

DESCRIPTION.—Between 5.0 and 6.0 mm in length, broadly oblong oval, shining yellow-brown with a lustrous reddish brown prothorax, head with a piceous median plaga down occiput, elytra yellowish brown, rows of striate punctures nearly straight, not very coarse, becoming fine and fainter at apex, no transverse depression near base, elytra evenly convex.

Head with interocular space a little more than half width of head, front finely and sparsely punctate, lustrous, clypeus dull alutaceous, finely punctate with a wide, shallow emargination over anterior margin, lateral edges somewhat ridged, especially along antennal sockets. Antennae extending below humeri, apical joints darker. Prothorax about a third wider than long, nearly as wide as elytra, with rounded sides and a tooth at each angle, lustrous reddish brown, nearly impunctate. Scutellum reddish brown. Elytra not three times as long as prothorax, usually paler yellowish brown with small inconspicuous humeri and faint trace of intrahumeral sulcus, striate punctures small and not closely set or deeply impressed, becoming finer at apex, in nearly straight rows; one specimen from Costa Rica (which I believe to be this species) has on each elytron a faint median reddish brown spot, and in another specimen from Nicaragua this spot is elongated into a short median vitta, and the humeri have a faint dark spot. Body beneath deeper brown than elytra, femora not toothed; claws with long tooth. Length, 5.0–5.8 mm; width, 2.5–2.8 mm.

TYPE.—In BMNH. A cotype (male) in first Jacoby collection, MCZ.

TYPE-LOCALITY.—Chontales, Nicaragua (Janson, collector).

OTHER LOCALITIES.—*Costa Rica:* Totuguera, Nevermann. *Nicaragua.*

REMARKS.—Jacoby named this species "*convexa*" probably because the elytra lack any depressions and are smoothly rounded. In this respect the species is like Linell's *M. viticola*. In fact, except for the lack of occipital dark spot in *M. viticola* there is little to separate the two species; even the aedeagi are alike. Much more material from intervening localities is needed to enable one to come to any conclusions about the status of these species.

Metachroma quintanae, new species

FIGURE 81

DESCRIPTION.—About 5.0 mm in length, shining yellow-brown with deeper reddish brown markings on either side of pronotum, on humeri, and along suture, and two median spots on each elytron and a submarginal one below humerus, pronotum finely punctate, elytra with spare striate punctures becoming evanescent at apex.

Head with interocular space less than half width of head, occiput reddish brown with almost strigose punctation, a faint median line down front to a poorly marked transverse line dividing front from clypeus, front sparsely punctate, clypeus short and broad and more coarsely and densely punctate, anterior margin over labrum nearly straight, jaws large and piceous. Antennae extending below humeri, distal joints darker. Prothorax large, almost as wide as elytra and rather flat, with rounded sides and small tooth at each angle, surface lustrous, finely and not very densely punctate, yellow-brown with a vaguely defined reddish brown area on each side. Scutellum reddish brown. Elytra considerably more than twice as long as prothorax, convex, with short intrahumeral sulcus and a slight transverse depression below, striate punctures rather fine and widely spaced, evanescent over basal umbones and at apex; shining yellowish-brown with reddish brown markings on humeri and along margin below, along suture, and two median spots, two other spots near suture. Body beneath reddish brown with paler yellow-brown abdomen; legs with short middle and hind tibiae, yellow-brown, a faint trace of tooth on femora, a short basal tooth on claws. Length, 4.9 mm; width, 2.5 mm.

TYPE.—Male, USNM 70696.

TYPE-LOCALITY.—Isla Mujeres, Quintana Roo, Mexico (29 March 1960; J. F. G. Clarke, collector).

REMARKS.—The large and rather flat prothorax and numerous reddish brown markings distinguish this species from other Mexican species. Only a single specimen is known, but undoubtedly, as in so many other species of the genus, there are color variations in this one.

Metachroma mutabile, new species

FIGURE 89

DESCRIPTION.—Between 3.2 and 3.6 mm in length, elongate oblong oval, shining, pale yellow-brown, some specimens with darker brown occipital spot and median pronotal spot and in these darker specimens scutellum and sutural edges reddish brown and sometimes a median dark spot or two on each elytron; pronotum finely and sparsely punctate, elytral striate punctures fading away after middle.

Head with interocular space slightly more than half width of head, occiput and front smoothly rounded, polished, very finely punctate with sometimes a small median depressed spot, often without any depression, no transverse sulcus dividing front from clypeus, anterior margin deeply emarginate over labrum, jaws piceous; in dark specimens occiput variably deeper brown, sometimes across entire base, often only a median brown spot, in paler specimens entirely pale yellow-brown. Antennae usually with deeper brown distal joints even in pale specimens. Prothorax about a third wider than long with slightly rounded sides and well-developed tooth at each angle, not very convex, without depressions, polished, very finely punctate, entirely pale in pale specimens and with a rounded median dark spot in darker ones. Scutellum varying from pale yellow to brown. Elytra with well-marked intrahumeral sulcus, otherwise without depressions, striate punctation not deeply impressed and evanescent after middle; in color varying from entirely pale yellow to having sutural edges deeper brown, and in dark specimens one or two small median reddish brown spots on each elytron. Body beneath varying from pale yellow brown to deep reddish brown, legs pale. Femora not toothed; claws with short basal tooth. Length, 3.2–3.6 mm; width, 1.6 mm.

TYPE.—Male, in MCZ. Five paratypes in MCZ; two paratypes in USNM.

TYPE-LOCALITY.—Guadalajara, Jalisco, Mexico (J. F. McClendon, collector).

OTHER LOCALITIES.—Six miles south of Durango, Durango, Mexico, H. F. Howden; 15 km. south of Mazanitla, Jalisco, at 5,900 feet in pine-oak forest, F. W. and F. G. Werner.

REMARKS.—As in so many species of *Metachroma*, there is considerable variation in the markings—from pale specimens without darker markings to ones with a spot of varying size on the occiput, another spot, also varying in size, in the middle of the pronotum, and one or two median spots on each elytron. The aedeagus is usually dark.

Metachroma peninsulare Crotch

FIGURE 80

Metachroma peninsulare Crotch, 1873, p. 42.—Horn, 1892, pp. 215, 216.

DESCRIPTION.—Between 4.6 and 5.5 mm in length, broadly ovate, head and pronotum coarsely punctate (the latter, at times, contiguously punctate), pronotum with very short inconspicuous pale hairs, head and prothorax deep reddish brown, elytra yellowish brown, often with sutural edges deeper brown and sometimes one or two dark median spots or even a median vitta on each elytron, apex of femora dark-ringed, femora minutely toothed.

Head with interocular space approximately half width of head, shining yellowish or reddish brown, densely and coarsely punctate throughout, sometimes a median depression on front, no transverse groove separating front from clypeus, clypeus with wide anterior margin slightly emarginate over labrum, jaws piceous. Antennae yellowish or deep reddish brown, slender, extending below humeri. Prothorax not twice as wide as long and nearly as wide as elytra in some specimens, with widely curved sides, not very convex, with conspicuous tooth at anterior angle and smaller one at basal angle, color deep reddish brown with a fine, short, pale yellowish pubescence not readily discernible except when viewed from the side. Scutellum deep reddish brown, often with a few punctures. Elytra not quite three times as long as prothorax, yellowish brown, often with deep reddish brown sutural edges and sometimes with one or two dark spots or even a median vitta on each elytron; striate punctures dense and rather deeply impressed, with slightly costate intervals especially in basal half and along sides of elytra, many confused punctures along sides, punctures on first lateral stria often continuing up on inner side of humerus. Body beneath varying from yellowish to reddish brown or even piceous, apices of femora dark-ringed, all femora minutely toothed, claws with long basal tooth. Length, 4.6–5.5 mm; width, 2.5–3.5 mm.

TYPE.—In LeConte collection, MCZ.

TYPE-LOCALITY.—"California" (a silver disc on specimen signifying Valley of the Gila River, which would indicate the specimen came from the extreme

southern boundary of California adjoining Arizona where the Gila River joins the Colorado).

OTHER LOCALITIES.—*Lower California:* Baja California, F. Knab; 5 miles south of Miraflores, Michelbacher and Ross; Las Animas, Sierra Laguna, Ross; Agua Caliente, Cape Region, Ross and Bohart; 15 miles south of San Domingo, Ross and Bohart; Todas Santos, Ross and Bohart, R. W. Radford and F. G. Werner; 5 miles west of San Bartolo, Michelbacher and Ross; Comundu, Michelbacher and Ross; La Paz, Triunfo, Michelbacher and Ross; Santa Rosa, H. W. Wenzel; San Felipe, H. W. Wenzel; Hermosillo, Sonora, W. L. Nutting, F. G. Werner.

REMARKS.—Although Crotch gives California as the type-locality, I have seen specimens only from Sonora, Mexico, and Lower California. Crotch's name *peninsulare* would indicate Lower California. There is the usual color variation in this species from elytra being entirely pale yellowish brown to elytra with one or two median spots or even a median vitta. It is an easily recognizable species because of the broad prothorax that has very dense coarse punctures and also a fine, inconspicuous, yellowish pubescence to be seen only when viewed from the side. A pubescence on the upper surface is rare in the genus.

Metachroma insulare Fall

FIGURE 92

Metachroma insulare Fall, 1927, p. 390.

DESCRIPTION.—Approximately 4 mm in length, elongate oblong oval, shining; head, antennae, legs, margins of elytra, and a short narrow vitta on either side of suture at base deep reddish brown; prothorax, middle part of elytra, and body beneath piceous; prothorax about as wide as elytra and half as long, hind femora conspicuously toothed.

Head with interocular space more than half width of head, no depressions on front or transverse depression separating clypeus, surface shining, deep reddish brown with piceous edging about eyes and a narrow piceous spot on occiput (Fall calls it an "impressed line"), moderately densely and distinctly punctate throughout, anterior margin of clypeus deeply and narrowly emarginate over reddish brown labrum, jaws piceous. Prothorax about a third wider than long and almost as wide as elytra, strongly convex with rounded sides, a small tooth behind eye but not at basal angles, surface shining with dense but not contingent punctures on disc, punctures moderately coarse, but finer about edges. Scutellum piceous. Elytra twice as long as prothorax, strongly convex, with small humeri and intrahumeral sulcus, a trace of transverse depression below, striate punctures widely spaced and not deeply impressed, larger below base, then diminishing and becoming obsolete at apex, on sides with three long striae and a short stria. Body beneath piceous, abdomen with fine hairs, legs reddish brown and pubescent. Front femora with tiny tooth, hind femora with large conspicuous tooth; claws simple. Length, 3.9 mm; width, 1.9 mm.

TYPE.—Male, in CAS.

TYPE-LOCALITY.—Pond Island Bay, Angel de las Guarda Island, Gulf of California (1 July 1921; E. P. Van Duzee, collector).

REMARKS.—Fall describes this species as one that "runs to *longulum* in Horn's table" and "falls naturally between that and *aeneicollis*." While it is of the same shape as the species in the *longicollis* (*aeneicollis* Horn) group, it is much larger and is more closely related to *longulum* Horn. It is at once separated from that species by the narrower elytra with the less-impressed striate punctures. As in *longulum,* the claws appear simple; but, unlike *longulum,* the hind femora are conspicuously toothed. There is no doubt that in a series of specimens the elytral dark markings will be found to vary in extent.

Metachroma longicollis Jacoby

FIGURES 67, 68

Metachroma longicollis Jacoby, 1891, p. 234.

DESCRIPTION.—From 2.4 to 3.4 mm in length, elongate oblong oval, shining, deep reddish brown to piceous, thorax often shining with an aeneous luster, legs and basal joints of antennae reddish brown, prothorax about a third wider than long, finely and densely punctate, elytra 2.5 times as long as prothorax and with regular striate punctures distinct to apex.

Head with interocular space more than half width of head, eyes small, not distinctly emarginate, with a short groove above antennal socket, occiput and front finely and densely punctate, no transverse groove separating front from clypeus, clypeus more coarsely punctate, anterior margin almost straight over labrum, a faint median line on front, shining dark piceous. Antennae short, not extending much below humeri,

basal joints paler, apical joints thicker and darker. Prothorax a third wider than long, strongly convex with arcuate sides, and with very narrow margin and very tiny tooth at each angle; lustrous piceous black, sometimes with an aeneous lustre, finely and densely punctate, often with a median impunctate line. Scutellum shining dark. Elytra more than twice as long as prothorax, with small humeral prominences and short intrahumeral sulcus, not otherwise depressed; striate punctures rather coarse, closely set and distinct to apex, on sides with costate intervals, shining dark piceous, legs usually paler reddish brown, with femora often darker on outside; breast coarsely punctate. Femora not toothed; claws with long basal tooth. Length, 2.4–3.4 mm; width, 1.1–1.6 mm.

TYPE.—Lectotype in BMNH.

TYPE-LOCALITY.—San Juan Bautista in Tabasco, Mexico (Höge, collector).

OTHER LOCALITIES.—*Mexico:* Isla, Vera Cruz, on pineapple; Loma Bonita, Oaxaca on pineapple; "Mexico," on banana.

REMARKS.—I have chosen as lectotype the first specimen named by Jacoby. This single specimen was taken by Höge at San Juan Bautista in Tabasco. According to Jacoby it is larger than the two collected by Champion from San Geronimo, Guatemala. A drawing has been made of one of the two specimens from San Geronimo (sent to me from BMNH) and also a drawing of a beetle (in USNM) from Oaxaca, Mexico, not far from the Tabasco type-locality and presumably the same species as the type. The Oaxaca specimen also is larger than the Guatemala one. I strongly suspect that there may be two species involved. I am describing (as *M. vittipennis*) a closely related species from Salvador and Nicaragua that is smaller and about the size of the Guatemala specimen. All of these more southern specimens may represent a single species. The aedeagus of the Salvador specimen has a shape different from that of the Mexican specimen.

Metachroma longicollis aeneicollis Horn, new status

Metachroma aeneicolle Horn, 1892, p. 210.

REMARKS.—Horn has described as *M. aeneicolle* a beetle for which he has given no locality but which is presumably from the United States. It is much like the Mexican species, and it occurs in Texas, the states about the Gulf of Mexico, and as far north as Kansas and Arkansas. There is little to differentiate these United States beetles from the Mexican ones. The aedeagi do not appear different. One specimen from Seabrook, Texas, is illustrated here. It is a deep reddish brown instead of piceous, but other specimens are as piceous as the Mexican beetles and also have an aeneous lustre as Horn indicated in his name *aeneicolle*. I am retaining Horn's name for this subspecies because of the wide distance between the Mexican localities of Tabasco and Oaxaca and the United States localities from Texas to Kansas rather than for any other difference that I can find.

TYPE.—In Horn collection, PAS.

TYPE-LOCALITY.—Unknown.

OTHER LOCALITIES.—*Texas:* Sugarland, on soybean; Macdona, H. A. Wenzel; Seabrook, H. A. Wenzel; Waco, on cotton, Glick. *Georgia:* Tifton, *Mississippi:* Bay St. Louis, P. McKinstry. *Louisiana:* Many, B. T. McDermott; Caddo Parish, in peach orchard debris. *Arkansas:* De Queen, B. T. McDermott. *Kansas:* Clarke County, at 1,962 feet, F. H. Snow.

Metachroma vittipennis, new species

FIGURES 69, 71, 72

DESCRIPTION.—Approximately 2.5 mm in length, elongate oblong oval, shining, prothorax densely punctate, deep brown to piceous, elytra with regular striate punctation, yellow-brown with a deep reddish brown vitta along side and another from middle of base running diagonally down the middle of elytron and joining suture below middle, sutural edges dark, and one specimen with elytra almost entirely dark, antennae with six apical joints dark.

Head with interocular space more than half width of head, eyes small, not noticeably emarginate, with short sulcus above antennal socket, finely punctate throughout and without transverse sulcus separating front from clypeus, anterior margin of clypeus straight, in one specimen a faint median depression on front; deep reddish brown, almost piceous. Antennae not extending much below humeri, outer joints thicker and darker, basal joints pale yellow-brown. Prothorax nearly as long as wide, with rounded sides, convex, shining, finely and densely punctate, deep piceous brown. Scutellum reddish brown. Elytra about twice as long as prothorax, widest at middle and tapering to apex; humeri small and sharp with a short intrahumeral sulcus, surface shining yellow-brown with deeper reddish brown sutural edges and a dark lateral

vitta and a median vitta extending diagonally across to join suture before apex; striate punctation regular and distinct to apex, more deeply impressed on sides with distinctly costate intervals. One specimen with nearly entirely dark piceous elytra except along apical side. Body beneath reddish brown, prosternum almost piceous, metasternum punctate, legs yellowish brown. Femora not toothed; claws with long tooth. Length, 2.2–2.5 mm; width, 1.0–1.2 mm.

TYPE.—Male, in Canadian National Museum. One paratype in USNM.

TYPE LOCALITY.—El Salvador, San Salvador (L. J. Bottimer, collector).

OTHER LOCALITIES.—One specimen taken at Brownsville, Texas, on plane from ?Guatemala; another specimen intercepted at Brownsville on plane from Nicaragua.

REMARKS.—This species is somewhat differently colored and smaller than *M. longicollis* Jacoby. Although some specimens of *M. longicollis* from Texas have reddish brown elytra, there is no distinct vittation as in this new species. There is a color variety with nearly piceous elytra. The aedeagus is different, however, from that of *M. longicollis*.

Metachroma minutum Jacoby

FIGURE 88

Metachroma minuta Jacoby, 1882, p. 171.

DESCRIPTION.—Approximately 2.7 mm in length, ovate, shining, head and prothorax deep orange-yellow and elytra and legs paler yellow-brown; pronotum finely and densely punctate, elytra with regular striate punctures becoming fine and inconspicuous at apex.

Head with interocular space barely half the width of head, occiput shining and minutely and sparsely punctate, clypeus broad and distinctly punctate, not separated from front by any sulcus, anterior margin nearly straight over labrum, jaws piceous. Antennae in type-specimen are broken; the remains are pale yellow-brown. Pronotum approximately twice as wide as long with well-rounded sides, moderately convex, depressed over head, finely and densely punctate and deeper orange-yellow than elytra. Elytra three times as long as prothorax, broadly rounded at apex, convex, with short intrahumeral sulcus and transverse depression below basal callosities; striate punctures fine, regular and apparent nearly to apex. Body beneath and legs pale yellow-brown. Length, 2.7 mm; width, 1.5 mm.

TYPE.—In BMNH.

TYPE-LOCALITY.—Belize, British Honduras (Blancaneaux, collector).

REMARKS.—The type-specimen sent me for study from BMNH has antennae and legs broken. There is one other specimen—a cotype (from the same locality and also collected by Blancaneaux) in the Bowditch collection which lacks head and prothorax. This is one of the tiny species closely resembling *M. testaceum* Blatchley found on the tip of Florida and in Cuba. It differs from *M. testaceum* by not having a sulcus separating the clypeus and from both *M. paulum* Blake and *M. brevistriatum* Blake, from Jamaica and Hispaniola respectively, in having more distinct punctation and being more ovate in shape. In this regard it is like *M. obesum* Blake from Hispaniola, which has dark markings and is more coarsely punctate.

Metachroma costaricanum Bechyne

FIGURE 76

Metachroma costaricana Bechyne, 1958, pp. 525, 526.

DESCRIPTION.—Between 3.3 and 4.0 mm in length, oblong oval, lustrous yellow-brown to piceous, occiput and pronotum polished, impunctate, elytra with only remnants of striate punctation along suture and in transverse depression below basal callosities.

Head with interocular space half width of head, in male, orbital groove on each side extending down to meet in middle of front, thus making a groove separating front from clypeus, clypeus strongly and densely punctate; in female, orbital groove on each side not extending below antennal socket and whole front smooth and polished without any transverse groove separating clypeus or any punctures on clypeus. Antennae slender, apical joints a little thicker and dark. Prothorax not twice as wide as long, moderately convex with rounded sides and small tooth at each angle, surface polished, impunctate, varying in color from yellow-brown to piceous. Scutellum smooth. Elytra not quite three times as long as prothorax, with prominent humeri and deep intrahumeral sulcus; punctures only in sulcus, in transverse depression below basal callosities, and near suture, otherwise surface polished and impunctate; one specimen entirely yellow-brown, remaining five specimens piceous with paler humeri and apex. Body beneath varying from yellow-brown to

piceous, legs also varying in color. Femora with tiny tooth; claws with basal tooth. Length, 3.3–4.0 mm; width, 1.6–2.0 mm.

TYPE.—Whereabouts of type not given by Bechyne. Five paratypes in Frey Museum; one paratype in USNM.

TYPE-LOCALITY.—Bebedero, Costa Rica (E. Reimoser, collector).

REMARKS.—There appears to be a difference in the sexes in the sculpture of the head. The one male examined has the orbital groove extending to the middle of the front, an unusual phenonemon in the genus; in the female this groove ends normally near the eye and the clypeus is not distinct from the front, being polished and impunctate. Like *M. mexicanum* Jacoby and *M. guatemalense* Jacoby, this species is lacking much of the elytral punctation. It differs from *M. guatemalense* in not having the prosternum rugosely punctate, and from *M. mexicanum* in being smaller.

Metachroma lucidum, new species

FIGURES 74, 75

DESCRIPTION.—From 3.2–4.0 mm in length, oblong oval, lustrous yellow-brown, sometimes with reddish brown markings on elytra, prothorax nearly twice as wide as long and very finely and sparsely punctate, elytra with striate punctation only in basal half and smooth elsewhere.

Head with interocular space less than half width of head, clypeus triangular and separated from front by well-marked transverse groove, anterior margin with very slight emargination, a short, deeply impressed line in middle of front, occiput with finer punctures than on clypeus, which is alutaceous and more distinctly punctate than rest of head, pale yellow brown with piceous jaws and in darker specimens with a dark base to occiput and sometimes a dark median spot on front. Antennae slender, pale, extending below humeri. Prothorax nearly twice as wide as long with well-rounded sides, not very convex and depressed over occiput; surface lustrous, very finely and sparsely punctate, pale yellow-brown with reddish brown margins. Elytra not much wider than prothorax and about three times as long, with small humeri and short intrahumeral sulcus, striate punctation only along base, in intrahumeral sulcus and slightly below basal umbone, and along suture, rest of elytra polished and impunctate; color pale yellow-brown, sometimes with a short median basal reddish brown spot, another such spot below intrahumeral sulcus and a more or less well-defined median fascia, these markings often broken into two or three spots. Body beneath pale, coxae deeper reddish brown; femora not toothed; claws with long tooth. Length, 3.2–4.0 mm; width, 1.7–2.2 mm.

TYPE.—Male, USNM 70694. Paratypes: 115 in USNM; 9 in CAS; 5 in MCZ; 5 in AMNH; 5 in UK; 5 in UA; 5 in OSU; 5 in BMNH; and 5 in CNC.

TYPE-LOCALITY.—Allen Point, Ascension Bay, Quintana Roo, Mexico (from beating small shrubs and palms, 13–17 April 1960; J. F. G. Clarke, collector).

OTHER LOCALITY.—*Mexico:* Cozumel, Espiritu Santo Bay, J. F. G. Clarke.

REMARKS.—The unusually short, wide, and rather flat prothorax, the sparsely punctate elytra, and lustrous, polished surface characterize this species. Its aedeagus resembles that of the group composed of *M. anaemicum* Fall, *M. testaceum* Blatchley, and *M. laterale* Crotch as well as other small species with a short, wide prothorax and well-marked sulcus across the front of the head. In most of the rest of these species, however, the pronotum is very densely punctate. This species differs from *M. guatemalense* Jacoby, in which Jacoby describes the antennae for the most part piceous and the prosternum as rugose punctate.

Metachroma hirsutum, new species

FIGURE 65

DESCRIPTION.—About 5 mm in length, elongate oblong oval, moderately shiny, yellow-brown, with base of occiput dark, a broad brown band across pronotum, dark scutellum, dark spot on humerus, another before middle below intrahumeral sulcus, and a third below that at about the middle of each elytron, sutural edges dark, undersurface a deep reddish brown, legs pale, a fine, short, closely appressed, silken, yellowish pubescence over upper surface and legs.

Head with interocular space less than half width of head, eyes large, surface coarsely but shallowly punctate, with a median dark line and dark base of occiput, no transverse sulcus dividing front from clypeus, but clypeus deeper brown and more coarsely punctate, anterior margin with small emargination over labrum, jaws deep brown. Antennae yellow-brown with outer joints darker. Prothorax about a third wider than long, only moderately convex, with

rounded sides and very small tooth at each angle, a broad deep brown transverse band across disc, surface finely punctate with fine, closely appressed, yellow pubescence. Scutellum dark. Elytra with regular, closely set striate punctures becoming faint and disappearing after middle, first lateral stria continuing up on inner side of humerus, and with finer intermediate punctures bearing fine, short, silken, pale pubescence; yellow-brown with dark sutural edges, and on each elytron three dark spots. Body beneath deep reddish brown with paler legs, femora as well as tibiae pubescent. Femora not toothed, claws with short basal tooth. Length, 4.8 mm; width, 2.1 mm.

TYPE.—Female, in CAS.

TYPE-LOCALITY.—Sixteen miles southwest of Hermosello, Sonora, Mexico (21 July 1950; J. P. Figg-Hoblyn, collector).

REMARKS.—In shape, color, and sculpture this species is not unlike *M. longulum* Horn except that it has an additional spot on the humerus and a dark band across pronotum. It is unique, however, in having a fine, inconspicuous, yellow pubescence over the upper surface and legs. Except for this hairiness it is very much like all the other species of the genus, and I would not set it in a separate genus solely for this one unique character. *M. peninsulare* Crotch has similar fine, closely appressed, silky, yellowish hairs over the pronotum, and the femora also are with hairs.

Metachroma nigricollis, new species

FIGURE 90

DESCRIPTION.—Approximately 3.5 mm in length, oblong oval, lustrous, head with occipital dark spot, prothorax piceous, elytra deep reddish brown with piceous sutural vitta widening in basal half and a second vitta from intrahumeral sulcus extending down side and widening in transverse depression, not reaching much below middle of elytra, femora ringed with black at apex, pronotum densely punctate, elytral striate punctures becoming indistinct at apex.

Head with interocular space half width of head, reddish brown with a dark median occipital plaga and dark jaws: clypeus not separated from front by a transverse groove, anterior margin over labrum widely emarginate; surface densely punctate on clypeus but not so densely on front. Antennae with dark outer joints. Prothorax about a third wider than long and almost as wide as elytra, moderately convex, with widely rounded sides, densely punctate, shining piceous, anteriorly deep reddish brown over head. Scutellum piceous. Elytra not three times as long as prothorax, with regular striate punctation, coarser in depression below basal callosities and becoming obsolete at apex, surface lustrous deep reddish brown with wide piceous sutural vitta becoming narrower below middle and a piceous lateral vitta extending from intrahumeral sulcus down side and widening below transverse depression, not extending to apical curve. Body beneath (abdomen missing) deep reddish brown, femora with dark ring about apex; claws with basal tooth. Length, 3.4 mm; width, 1.6 mm.

TYPE.—Female, in BMNH.

TYPE-LOCALITY.—"Mex." (second Jacoby collection).

REMARKS.—Only a single poor specimen lacking the abdomen is known, but it is sufficiently distinct in its large, closely punctate, dark pronotum and vittate elytra not to be confused with any other species so far described from Mexico.

Metachroma clarkei, new species

FIGURE 70

DESCRIPTION.—Between 4.5 and 5.0 mm in length, oblong oval, lustrous yellowish or reddish brown with a piceous spot on occiput, four spots across pronotum, occasionally combined into two large ones, and a dark sutural vitta widening below scutellum, a dark spot on humerus and below and two submarginal spots and one below middle, all these dark markings variable in extent; pronotum very finely punctate, striate punctures on elytra coarse (especially in transverse depression) and visible to apex.

Head with interocular space less than half width of head, shining reddish brown with a piceous median plaga from occiput down front almost to clypeus, occiput punctate, a median depression on front, a faint transverse line separating front from clypeus, clypeus more coarsely punctate, anterior margin only slightly curved, sometimes nearly straight over labrum, jaws piceous. Antennae extending below humeri, distal joints darker. Prothorax large, almost as wide as elytra, about a third wider than long, not very convex, with well-rounded sides and small tooth at each angle,

lustrous, very inconspicuously punctate in some specimens, never coarsely or very densely punctate, reddish brown with four piceous spots across, sometimes combined to make a single large spot on each side, margins dark. Scutellum dark. Elytra lustrous, about 2.5 times length of prothorax, with well-marked intrahumeral sulcus and transverse depression in which striate punctures are coarser, punctures visible to apex, on sides intervals faintly costate; markings, as described above, variable, especially in width of sutural dark areas, margins dark. Body beneath deep reddish brown to piceous with legs paler. Femora with minute tooth; claws with long tooth. Length, 4.5–5.0 mm; width, 2.3–2.5 mm.

TYPE.—Male, USNM 70695, with five paratypes.

TYPE-LOCALITY.—Cozumel, Yucatan Peninsula, Espirito Santo Bay, Mexico (6 April 1960; J. F. G. Clarke, collector).

REMARKS.—This is one of several species with a 4-spotted pronotum. It differs from *M. quadrimaculatum* Jacoby in having more coarsely punctate elytra; from *M. ornatum* also in that regard as well as being a wider, more robust beetle; from *M. bimarginatum,* new species, in lacking the strong submarginal costa; and from *M. bipunctatum,* according to Jacoby's description, in that the thorax is not densely punctate. The tooth on the claw is longer in this species than in *M. bipunctatum* Jacoby.

I take pleasure in naming this after Dr. J. F. Gates Clarke, who has collected several new species of *Metachroma* in the West Indies as well as in Mexico.

Metachroma panamense, new species

FIGURE 77

DESCRIPTION.—From 4.2 to 4.6 mm in length, elongate oblong oval, shining, deep yellowish or reddish brown, usually with a dark plaga down occiput, four elongate spots across pronotum and one or two median spots on each of the elytra, which have a dark suture, sometimes this is widened, occasionally beetles are entirely pale; pronotum very finely punctate, elytral punctation well spaced and evanescent at apex.

Head with interocular space less than half width of head, eyes large, occiput and front shining, finely punctate, usually a dark plaga down front, often a median linear depression, in one specimen a trace of depressed line separating front from clypeus, clypeus wrinkled, alutaceous, not shiny, with margin over labrum somewhat curved, jaws piceous. Antennae extending below humeri, pale yellow-brown. Prothorax not very convex and nearly as wide as elytra, with widely curved sides, shining, very finely punctate, deep yellowish or reddish brown with four elongate piceous spots across basal half, in a pale specimen only traces of these spots. Scutellum usually reddish brown. Elytra not three times as long as prothorax, with small humeri, short intrahumeral sulcus, and only a trace of transverse depression below, punctation regular, not closely set, and vanishing at apex; some specimens entirely pale, in others, suture dark, spots varying from one or two median ones on each elytron to specimens with dark suture widening and spots lengthening to coalesce. Body beneath varying from pale yellow-brown to deep reddish brown with abdomen tending to be paler; femora with small tooth; claws with short basal tooth. Length, 4.2–4.6 mm; width, 2.0–2.3 mm.

TYPE.—Male, USNM 70692, with three paratypes.

TYPE-LOCALITY.—Panama (30 April 1911; A. H. Jennings, collector).

REMARKS.—This is another of the species with a 4-spotted prothorax. It is closely related to *M. ornatum* Jacoby from Chiapas, Mexico, but it is a larger beetle and its prothorax appears to be larger and the elytra not so long proportionately.

Metachroma ornatum Jacoby

FIGURE 87

Metachroma ornata Jacoby, 1891, p. 234.

DESCRIPTION.—About 3.7 mm in length, narrowly oblong oval, lustrous, prothorax almost as wide as elytra and rather flat with well-rounded sides, very finely punctate, elytra with striate punctures enlarged in transverse depression but becoming faint on sides and at apex; head and prothorax deep reddish brown, occiput with black median streak down front, prothorax with from two to four spots, elytra with piceous humeri and markings extending from humerus downward, widening to join a widening sutural vitta in a broad area extending almost across elytra but not reaching apex.

Head with interocular space half width of head, occiput with a median dark plaga extending down front, shining, inconspicuously punctate, a faint sulcus dividing it from clypeus, which is alutaceous and

wrinkled and widely emarginate over labrum, jaws piceous. Antennae with distal joints dark. Prothorax approximately twice as wide as long, with arcuate sides and small tooth at each angle, flat, lustrous, deep reddish brown with two to four deeper piceous spots across it, mirror-smooth, with almost invisible punctures. Scutellum dark. Elytra not much wider than prothorax and over three times as long, tapering to apex; striate punctures regular but not closely set, in transverse depression moderately coarse but on sides and at apex becoming fine and faint; lustrous reddish brown with dark piceous markings from humerus downward, widening to join a wide, piceous sutural vitta and to form a dark area nearly covering elytra but not reaching apex. Body beneath deep reddish brown, legs yellowish brown; claws with basal tooth. Length, 3.7 mm; width, 1.9 mm.

TYPE.—In BMNH.

TYPE-LOCALITY.—Tapachula, Chiapas, Mexico (Höge, collector).

REMARKS.—Only a snigle female cotype, from BMNH, has been examined. In markings, this species is similar to *M. bimarginatum,* new species, from Tepic, Nayarit, Mexico, but it is more slender and has no trace of the pronounced elytral costae of *M. bimarginatum.* It is also a narrower species than *M. quadrimaculatum* Jacoby. In his description Jacoby writes that the prothorax has a "transverse slightly sinuate black spot on either side" and later adds that "in one specimen the thorax has four small spots instead of two large ones," which undoubtedly refers to the specimen I have at hand.

Metachroma bipunctatum Jacoby

FIGURES 61, 73

Metachroma bipunctata Jacoby, 1891, p. 235.

DESCRIPTION.—From 4.6 to 5.0 mm in length, broadly oblong oval, shining yellow-brown, with from two to four spots across pronotum and sometimes two median spots on each elytron, these may be lacking or reduced to one, prothorax nearly as wide as elytra and punctate, elytra with striate punctures deeply impressed and visible to apex, intervals, especially in female, somewhat costate, body beneath tending to be dark.

Head with interocular space half width of head, occiput often dark, with punctures, rest of front smooth and with only obsolete punctures, no transverse sulcus separating clypeus, anterior margin of clypeus in a wide arc over labrum, jaws piceous. Antennae slender, five distal joints darker brown than pale basal ones. Prothorax unusually large, almost as broad as elytra and moderately convex, without depressions and with well-rounded sides, a prominent tooth at each angle, surface coarsely (in some specimens much finer) and densely punctate on sides, usually smooth about edges, at base, and anteriorly; pale yellow-brown, in type-specimen a piceous spot on each side of middle, in three other specimens four spots (varying from pale to deep reddish brown) across pronotum, Scutellum reddish brown. Elytra more than twice as long as but scarcely any wider than prothorax, with regular, coarse, deeply impressed striate punctures that are visible to apex, in male, costate intervals on sides, in female, all intervals somewhat costate, little trace of transverse depression and intrahumeral sulcus feeble; pale yellow-brown with reddish brown sutural edges in some specimens and one or two small reddish brown spots down middle of each elytron, one spot on each elytron in type, but no spots in a female examined. Body beneath in two specimens and type dark, in the pale female, abdomen pale; legs pale, femora minutely toothed, claws with short basal tooth. Length, 4.6–5.0 mm; width, 2.4–2.5 mm.

TYPE.—Male, in BMNH.

TYPE-LOCALITY.—Vera Cruz, Mexico (Höge, collector).

OTHER LOCALITY.—*Mexico:* Mazatlan, Sinaloa (9 May 1961; Howden and Martin, collectors).

REMARKS.—The large prothorax and relatively short elytra characterize this species. The thorax is wider and not so convex as in *M. longulum* Horn, and the claws have a short basal tooth, and, unlike *M. longulum,* the female has a distinctly costate appearance. There is a close resemblance between this species and *M. clarkei* from the Yucatan Peninsula, but the claws in this species have a short basal tooth and in *M. clarkei* the tooth is long. The type is from Vera Cruz on the east coast of Mexico, and the only other specimens examined are three from Mazatlan, Sinaloa, on the west coast. Although varying somewhat in markings, the specimens from Mazatlan correspond well in other ways with the type. The one female specimen is paler and without elytral spots.

Metachroma bimarginatum, new species

FIGURE 66

DESCRIPTION.—From 4.0 to 4.5 mm in length, oblong oval, shining yellow-brown, pronotum with four small spots across it, elytra with wide piceous markings covering most of disc except on sides, base, and apex, a well-marked lateral costa and deeply impressed striate punctures in basal half fading away entirely after middle.

Head with interocular space half width of head, polished and (except at base of occiput) nearly impunctate, a faint frontal linear depression, no transverse sulcus dividing front from clypeus, clypeus with tiny emargination over labrum, jaws piceous, otherwise yellow-brown. Antennae with six basal joints pale, distal ones dark brown. Prothorax moderately convex, nearly as wide as elytra, with widely rounded sides, surface lustrous, nearly impunctate, yellow-brown with four rather small piceous spots across it, outer ones near lateral margin tending to be elongate. Scutellum reddish brown. Elytra more than twice as long as prothorax, with deeply sunken, coarse, striate punctures in basal part, intervals being costate, and on side a strong costa from humerus extending well down side of elytra; punctures in apical half fading away; a piceous mantel over most of disc but not covering base, sides, or apex and somewhat variable in the two specimens examined. Body beneath pale yellow-brown with breast and first abdominal segments tending to be dark, legs pale, claws with long basal tooth. Length, 4.0–4.5 mm; width, 2.0–2.1 mm.

TYPE.—Female, at KU. One female paratype in USNM.

TYPE-LOCALITY.—Sixteen miles northwest of Tepic, Nayarit, Mexico (19 July 1953, University of Kansas Expedition).

REMARKS.—The strong lateral costa on the elytra is the most striking character of this species. Since only two females have been examined, it is possible that this costa is not so developed in the male. In its four-spotted pronotum this species resembles *M. quadrimaculatum* Jacoby and *M. ornatum* Jacoby, but both of those species lack the costa. Fall's species, *M. coronadense*, has several well-developed elytral costae in the female, but it is a pale species without piceous markings and the elytral punctation is distinct to the apex. It has also been collected in Nayarit, Mexico.

Metachroma mexicanum Jacoby

FIGURES 91, 93

Metachroma mexicana Jacoby, 1882, p. 171.

DESCRIPTION.—Between 3.7 and 4.5 mm in length, broadly oblong oval, shining, reddish or yellowish brown with broad impunctate prothorax and elytra with remnants of striate punctation only in intrahumeral sulcus, femora toothed; color varying from specimens entirely pale to ones with pronotum having one or two spots, and elytra with dark sutural edges and dark margin and a broad dark median vitta.

Head with interocular space more than half width of head, occiput and front smooth, nearly impunctate, no transverse sulcus, clypeus finely punctate with lateral edges curved slightly upward, anterior margin with well-marked emargination over labrum, jaws piceous. Antennae with more deeply colored distal joints. Prothorax approximately a third wider than long, moderately convex with strongly arcuate sides and well-developed tooth at each angle, surface polished, impunctate, yellow-brown, in darker specimens with one or two piceous spots. Scutellum reddish brown or darker. Elytra convex with prominent humeri, short intrahumeral sulcus, and depression below basal callosities, in both of which striate punctures are visible, also along suture, otherwise punctures not apparent; surface polished yellowish or reddish brown, in darker specimens with dark sutural edges and margin, and with a median vitta of varying length. Body beneath pale in pale specimens, more or less piceous in dark ones, femora toothed and claws with tooth nearly as long as claw; in dark specimens apices of femora and tibiae as well as tarsi dark. Length, 3.7–4.5 mm; width 2.0–2.5 mm.

TYPE.—In BMNH.

TYPE-LOCALITY.—Guanajuato, Mexico "(Dugès, coll. Sallé)."

OTHER LOCALITIES.—*Mexico:* Silao, Sallé; Cuernavaca, Morelos, Höge; E. Gavilan, 15 km. north of Taxco, at 5,390 feet; Guerrero, in oak and pine scrub, F. Werner and W. Nutting; Minas Neuvas, Sonora, C. and P. Vaurie; Sinaloa, Mazatlan, Paul Spangler.

REMARKS.—A specimen collected by Höge in Cuernavaca and sent to me by the British Museum (Natural History) is an entirely pale female without any dark markings. Two other specimens, collected by Werner from Guerrero, also are pale, but a single female from Minas Nuevas, Sonora, corresponds more with the

figure given by Jacoby with spotted pronotum and elytra with a median vitta, except that in the Sonoran specimen the median vitta is longer and it lacks the basal spot. Apparently this species is another of the variably marked ones. It is to be distinguished chiefly by its polished, nearly impunctate elytral surface as well as head and pronotal surfaces.

Metachroma guatemalense Jacoby

FIGURES 85, 86

Metachroma guatemalensis Jacoby, 1882, p. 172.

DESCRIPTION.—About 3.7 mm in length, ovate, shining, yellowish to deep reddish brown, sometimes without dark markings, sometimes with a median dark spot on front of head between antennal sockets and a dark plaga down occiput, pronotum with a piceous spot on each side in anterior half, elytra with dark humeri, a median spot below transverse depression and a lateral spot at middle of each elytron, only remnants of striate punctation in transverse depression.

Head with interocular space half width of head, surface shining, impunctate, without median depression but with a transverse, rather indistinct sulcus dividing front from clypeus, anterior margin of clypeus straight over labrum; yellowish or reddish brown, sometimes with a dark band between antennal sockets and a dark mark down occiput. Antennae extending below humeri, joints 7–11 darker. Prothorax about a fourth wider than long, convex, produced anteriorly over head, and with widely rounded sides and conspicuous tooth at each angle; yellowish to deep reddish brown, sometimes with a moderate-size piceous spot on each side near anterior margin; surface anteriorly with dense, fine but distinct punctation, smooth on sides and in basal half. Scutellum in dark specimen edged with piceous. Elytra not much wider than prothorax at base but wider in apical half, convex with only a slight depression at intrahumeral sulcus and slight transverse depression below this in which a few striate punctures are evident, otherwise, even in intrahumeral sulcus, the only punctures are along suture; surface shining yellowish to deep reddish brown, sometimes with a dark spot on humerus, a piceous spot in transverse depression and another on side at middle. Body beneath deep reddish brown with abdomen paler, femora usually with dark ring about apical constriction, femora not toothed, claws with long basal tooth. Length, 3.7–3.9 mm; width, 2.3 mm.

TYPE.—Female, in BMNH.

TYPE-LOCALITY.—Cahabon, Alta Verapaz, Guatemala (Champion, collector).

OTHER LOCALITY.—Cacao, Trece Aguas, Alta Verapaz, Guatemala (Barber and Schwarz, collectors).

REMARKS.—The British Museum (Natural History) has sent me its only specimen, the type, for study. It is an entirely pale yellow-brown specimen with dark outer joints to the antennae. It resembles *M. mexicanum* Jacoby in its sparse elytral punctation but is a smaller beetle with more widely rounded sides to the prothorax. Another specimen collected (by H. S. Barber) in Alta Verapaz, Guatemala, has dark markings on the head, prothorax, and elytra.

Metachroma ignotum, new species

FIGURE 64

DESCRIPTION.—Between 4.2 and 4.5 mm in length, elongate oblong oval, elytra more than three times as long as prothorax and much wider, with deeply impressed striate punctures visible entire length and having costate intervals, yellowish brown to deep reddish brown, in paler specimen a dark median band on pronotum, femora strongly toothed.

Head with interocular space half width of head, surface in dark specimen densely and moderately coarsely punctate, especially on clypeus, in paler specimen occiput and front finely punctate, clypeus coarsely punctate, in both a trace of transverse line dividing clypeus from front and a median linear depression on front, anterior margin of clypeus nearly straight over labrum, yellowish or reddish brown with piceous jaws. Antennae extending well below humeri, slender, with apical joints dark. Prothorax not twice as broad as long, convex with rounded sides and small tooth at each angle; surface in dark reddish brown specimen densely and coarsely punctate, in yellow-brown specimen very finely punctate with a piceous median band not reaching margins. Scutellum reddish brown, in pale specimen sutural edges also reddish brown. Elytra much wider than prothorax and more than three times as long, with parallel sides and well-rounded apex; striate punctures very closely set and deeply impressed, on sides coarser, distinct to apex, intervals strongly costate, so entire surface appears ribbed; shining yellowish brown in one specimen, deep reddish brown in other.

Body beneath from deep reddish brown to piceous, femora with conspicuous tooth, claws with basal tooth half as long as claw. Length, 4.2–4.5 mm; width, 2.2–2.3 mm.

TYPE.—Female, USNM 70691, with one female paratype.

TYPE-LOCALITY.—Totana, Murcia, Spain, Balaquer 1947 (probably in error).

REMARKS.—Although this species is rather unusual in its strongly costate elytra, it is in every way a species of *Metachroma*. Since *Metachroma* is not known to occur in Europe, I believe that the locality given on the label is incorrect and that it is either a Mexican or Central American species, or possibly is from South America.

Key to Species from South America

1. Prothorax with sides angulate at middle. (Amazonas) ..... ***M. egleri*** Bechyne
   Prothorax with sides rounded 2
2. Large (7.0 mm), elytral striate punctures distinct to apex. (Galapagos Islands) ***M. labrale*** Blair
   Smaller (3.5–5.5 mm) 3
3. Elytra with a more or less marked transverse depression below basal callosities 4
   Elytra smoothly convex without transverse depression 6
4. Elytra three times as long as prothorax, claws with very small basal tooth. (Entre Rios, Argentina) ..... ***M. argentinense,*** new species
   Elytra not three times as long as prothorax 5
5. Claws with basal tooth nearly half as long as claw (Chaco de Santiago del Estero, Argentina) ..... ***M. jacobyi*** Bechyne
   Claws with short basal tooth ..... ***M. venezuelense*** Bechyne
6. Elytral punctures very fine and disappearing after middle. (Mendoza, Argentina) ***M. mendozae,*** new species
   Elytral punctures large, becoming finer at apex. (Cartagena, Colombia) ***M. cartagenense,*** new species

Metachroma labrale Blair

FIGURE 101

Metachroma labrale Blair, 1933, p. 484.

DESCRIPTION.—Length, 7.0 mm; elongate oblong oval, lustrous deep reddish brown with finely punctate head and nearly impunctate pronotum, striate punctures on elytra widely spaced, not impressed, and visible to apex, hind femora minutely toothed.

Head with interocular space approximately half width of head, occiput rather finely punctate, a median depressed spot on front, no transverse sulcus separating front from clypeus, which is densely and distinctly punctate, anterior margin widely curved over wide labrum, jaws even deeper reddish brown. Antennae entirely reddish brown, extending below humeri. Prothorax half as wide again as long, smoothly convex without depressions and with well-rounded sides, a small tooth at each angle, surface mirror-smooth and only under high magnification seen to be finely punctate. Elytra a little wider than prothorax and more than twice as long, convex, with only faint intrahumeral sulcus and faint transverse depression below, striate punctures rather fine, not impressed, widely spaced and distinct to apex, with many confused punctures and some ridging at apex, color not so deep reddish brown as prothorax. Body beneath deep reddish brown with legs paler, lightly pubescent, hind femora with small tooth, claws with short basal tooth. Length 7.0 mm; width, 3.6 mm.

TYPE.—In BMNH.

TYPE-LOCALITY.—James Island, Galapagos Islands.

OTHER LOCALITY.—Villamil, Albermarle Island, Galapagos Islands. (4–14 March 1906; F. X. Williams, collector).

REMARKS.—As Blair has written, this species is very close to *M. variabile* Jacoby and also to *M. regulare* Jacoby and *M. ustum* LeConte. These three species are the largest of the genus and they closely resemble each other in shape, size, coloration, and even in punctation. In *M. labrale* there is more distinct elytral punctation in the apical half, with many confused punctures at the tip. Blair also has pointed out that the lower part of the face is wider and the tooth at the base of the claw is not so long as in the other three species. In both *M. ustum* and *M. variabile* there are

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forms with dark elytral markings, and it is quite possible that similar color variations occur in *M. labrale*.

Metachroma cartagenense, new species

FIGURES 97, 98

DESCRIPTION.—About 4.5 mm in length, oblong oval, shining yellowish or reddish brown, with head, prothorax, and undersurface deeper reddish brown; in unmarked specimen (type) no piceous markings, in spotted specimen, a dark occipital spot and on each elytron two small reddish brown spots—one on humerus and the other on side somewhat below middle.

Head with interocular space half width of head, a finely marked transverse sulcus between front and clypeus, and on vertex a slight median linear depression; clypeus broad, alutaceous, and finely punctate, with anterior margin broadly but shallowly emarginate; front and occiput shining and finely punctate, yellowish or reddish brown, in spotted specimen with a dark occipital plaga extending down front almost to clypeus. Antennae yellow-brown with apical joints a little darker. Prothorax approximately a third wider than long, moderately convex with widely rounded sides; shining, dark reddish brown, in spotted specimen with vaguely defined darker area on each side; very finely and shallowly punctate. Scutellum reddish brown. Elytra nearly three times as long as prothorax, smoothly convex, without depressions except for a very short shallow intrahumeral one made by sunken punctures; striate punctures large, regular, becoming finer at apex; yellow-brown, in spotted specimen with a reddish brown spot on humerus and another on side below middle, sutural edges also deeper brown, in type-specimen elytra deep reddish brown without spots. Body beneath reddish brown, legs yellowish brown, femora minutely toothed, claws with moderately long tooth. Length, 4.5 mm; width, 2.2 mm.

TYPE.—Male, in MCZ. One female paratype in USNM.

TYPE-LOCALITY.—Cartagena, Bolivar Province, Colombia (10 July 1920; F. R. Mason, collector). A female specimen (in Frey Museum) was collected at Cartagena by C. Gagzo on 12 June 1905.

REMARKS.—This species differs from *M. venezuelae* Bechyne in having the elytra more convex and without depressions. In this regard it resembles *M. viticola* Linell and *M. convexum* Jacoby, although it is not so oval as those species. The aedeagus is also slightly different. The type is without dark markings on head, pronotum, and elytra but it is a deeper reddish brown than the spotted female paratype, which has a spot on the head, vague darker areas on pronotum, and two small spots on each elytron.

Metachroma venezuelense Bechyne

FIGURE 99

Metachroma venezuelense Bechyne, 1953, p. 116.

DESCRIPTION.—About 5 mm in length, oblong oval, yellow-brown with slightly deeper brown head and prothorax, prothorax finely and moderately densely punctate, elytra with striate punctures distinct to apex.

Head with interocular space half width of head, front and clypeus not separated by sulcus, a faint median depression on vertex, surface shining and with shallow punctures becoming coarser on clypeus, clypeus broad and widely emarginate over labrum with somewhat ridged sides, the unusually large jaws piceous. Antennae slender, outer joints wider and darker. Prothorax less than a third wider than long, moderately convex with rounded sides and small tooth at each angle; surface lustrous, deep chestnut brown with fine punctures not so dense about edges. Scutellum reddish brown. Elytra less than three times as long as prothorax and not much wider; humeri small, a short intrahumeral sulcus and faint transverse depression below; striate punctures distinct to apex, somewhat enlarged in transverse depression. Body beneath reddish brown, legs paler yellowish brown; femora minutely toothed, claws with short basal tooth. Length, 5 mm; width, 2.3 mm.

TYPE.—In Frey Museum, with one paratype.

TYPE-LOCALITY.—Venezuela.

REMARKS.—The paratype sent to me from the Frey Museum shows that this beetle belongs in the group of rather large, robust species which is composed of *M. ustum* LeConte and its relatives. The aedeagus is similar to that of both *M. ustum* and *M. variabile* Jacoby. It differs from the group composed of *M. viticola* Linell from Texas, *M. convexum* Jacoby from Nicaragua, and *M. cartagenense* from South America in having elytra that are not so convex but have a well-developed intrahumeral sulcus and transverse depression below. Bechyne wrote of a single male he had seen from northern Colombia that was 4.0 mm long and had very strongly punctate elytra. It might be added

too that the prothorax is much more distinctly punctate than is usual in the *ustum* group, in the single specimen sent to me.

Metachroma egleri Bechyne

FIGURE 96

Metachroma egleri Bechyne, 1961, p. 16.

DESCRIPTION.—The original description is as follows (Bechyne, 1961, p. 16):

Brasil, Est. Amazonas: Manaus, Ponta Negra (campina), 12.v.1961 (Dr. W. Egler, MG).

Long. 3.5 mm. female inconnue.

Testacé, génoux (largement), tarses, sternum, marginations du thorax, écusson, suture (sur le ler intervalle) et bords latéraux des élytres et épipleures, rouge brun; antennites 4–6 et une bande longitudinale sur les intervalles 4–6 des élytres, commençant a la base et se terminant dans le tiers apical d'un brun sombre; antennites 7–11 noirs. Taille allongée avant-corps mat soyeux (réticulation bien visible sous le grossissement de 20–30 x), élytres plus brillants (réticulation visible sous le grossissement de 80–100 x).

Tête obsolétement et éparsement ponctuée (grossissement de 50–80 x) sur le front et sur le vertex, ponctuation du clypéus plus distincte. Front presque 3 x aussi large que le diamètre transversal d'un oeil. Sillons oculaires étroits et très profonds, réunis avec les sillons frontaux qui s'arrétent sur le tiers exterieur du front en se réunissant en angle obtus (de 120°) avec les sillons latéro-clypéaux. Dépression interoculaire effacée, sillon longitudinal central du front finement insculpté. Clypéus subparallèle (plutot très légèrement dilaté en avant), 1,3 x aussi long que large, nettement émarginé au milieu du bord antérieur. Calus surantennaires effacés, orbites plus brillants que leurs environs, larges. Antennes atteignant le milieu des élytres, 2e article épaissi et allongé, 3–6 minces, le 3e (qui est plus court que le 2e) égal au 4e et au 6e, le 5e aussi long que le 2e, les 5 apicaux épaissis, 7 et 8 subégaux, chacun d'eux aussi long que les 3 et 4 reunis.

Thorax à forme très particulière, très finement et éparsement pointilé (grossissement de 50–80 x). Angles antérieurs défléchis, base fortement marginée.

Elytres fortement et très regulièrement ponctués (grossissement de 3–5 x), points diminuant en arrière. Calus basal faible mais distinct, accentué en arrière par une faible dépression transversale. Intervalles plans, le 5e faiblement convexe en avant a côté du calus húmeral, les 2 latéraux faiblement convexes dans la moitié antérieure. Series 8 et 9 de points atrophiées (points très épars et irrégulièrement disposés dans le liers médian). Dessou peu brillant. 5e segment abdominal marqué par une fine carène en arrière, coupé en ligne presque droite au milieu du bord postérieur. Pattes robustes, dent des fémurs extrêmement fine (grossissement de 40–50 x), émargination des 4 tibias postérieurs crénélée, profonde.

Espece bien isolée dans le genre à cause de la structure du thorax et la sculpture des élytres (modification des series post-humerales de points). Elle est la premiere connue du Bresil; les nombreuses espèces se retrouvent dans l'Amérique Centrale et aux Antilles, pénétrant dans l'Amérique du Nord, quelques unes ont été trouvées en Colombie et Venezuela.

REMARKS.—The whereabouts of the type was not given by Bechyne and is unknown to the writer.

Metachroma jacobyi Bechyne

FIGURE 95

Metachroma jacobyi Bechyne, 1955, p. 635. (Not *Balya jacobyi* Lefèvre.)

DESCRIPTION.—About 4.5 mm in length, elongate oblong oval, shining yellow-brown, prothorax about a third wider than long, nearly impunctate, elytra with fine, regular, and distinct punctation.

Head with interocular space half width of head, occiput polished and with distinct, sparse punctures and a small faint depression in middle of front, clypeus more distinctly but not densely punctate, no emargination but nearly straight across anterior margin, jaws pale brown. Antennae entirely pale, extending below humeri, outer joints wider. Prothorax moderately convex with rounded sides and small tooth at each angle; margin very narrow, surface lustrous, nearly impunctate, entirely pale yellow-brown. Scutellum pale. Elytra not three times as long as prothorax, with rather small humeri and well-defined intrahumeral sulcus, a transverse depression below basal callosity, striate punctures deep and distinct nearly to apex, with a trace of costate intervals more developed near lateral margin. Body beneath and legs entirely pale yellow-brown, femora toothed, claws with a basal tooth nearly half length of claw. Length, 4.3 mm; width, 2.4 mm.

TYPE.—In Frey Museum.

TYPE-LOCALITY.—"Chaco de Santiago del Estero. Bords du Rio Salado, env. d'Icaño, Argentina" (December 1904; E. R. Wagner, collector).

REMARKS.—The specimen that Bechyne determined as *Balya jacobyi* Lefèvre but about which he wrote that it is a species of *Metachroma* has been sent to me by Gerhard Scherer from the Frey Museum. The label on this specimen, which gives the locality and collector, also bears the lettering "Museum Paris." But the specimen could not be one that Lefèvre had seen, because he died ten years before the date of collection (December 1904). Bechyne, however, is quite correct in writing that the description of the genus *Balya* does

not fit this beetle. It is, in truth, a species of *Metachroma* strongly resembling many other species of that genus. In the male of *Balya*, according to Jacoby, there is a tooth on the intermediate and posterior tibiae described as "acute, long and triangular"; in the female, the intermediate tibiae alone are toothed and the posterior tibiae are simply emarginate. This speciman is a female, and there is the same emargination with what might be described as "toothing" on the hind tibiae as on the intermediate. But Bechyne was not correct in identifying this *Metachroma* as Lefèvre's species of *Balya* because in the first place it does not fit Lefèvre's description of *jacobyi* in coloring, being entirely pale flavous, whereas *Balya jacobyi* has the distal joints of the antennae, the breast, and abdomen piceous black. I believe the chief point that caught Bechyne's attention is the fact that the beetle has emarginate tibiae and is from Argentina, but even here, Bechyne erred because this beetle is from Chaco de Santiago del Estero, an entirely different sort of habitat from the type-locality of *B. jacobyi*, which is Mendoza. Lefèvre, with his knowledge of the Eumolpinae in which he was an acknowledged specialist, was not one to mistake a species of *Metachroma* for *Balya*. In his Catalogue of Eumolpinae published in 1885, the year after he described *Balya jacobyi*, he wrote that the claws are appendiculate in *Balya*, a point that Jacoby, who described the genus, did not mention. R. T. Thompson of the British Museum (Natural History) has written me that *Balya picta* (Perty), which is Jacoby's *B. quadrimaculata*, has appendiculate claws.

Metachroma argentinense, new species

FIGURE 100

DESCRIPTION.—About 5.5 mm in length, elongate oblong oval, shining yellow-brown with head and prothorax deeper brown, head with sides of clypeus curling upward slightly, pronotum finely punctate, elytra with deeply impressed, closely set punctures becoming finer and shallower towards apex.

Head with interocular space approximately half width of head, clypeus unusually broad and rectangular and appearing somewhat scooped out and rugosely wrinkled, anterior margin widely emarginate over labrum; a faint trace of transverse suture between front and clypeus, and a depressed medium line on vertex, rather obsoletely punctate, shining deep brown with slightly darker jaws. Antennae pale, slender, extending below humeri. Prothorax about a third wider than long, moderately convex with rounded sides and small tooth at each angle; surface lustrous brown with distinct yet not very dense or coarse punctures. Elytra approximately three times as long as prothorax with closely set, small punctures rather deeply impressed except on basal callosities and toward apex, shining yellow-brown without dark markings. Body beneath and legs yellowish brown, femora toothed, claws with short basal tooth. Body beneath and legs entirely yellowish brown. Length, 5.5 mm; width, 2.6 mm.

TYPE.—Male, in Frey Museum.

TYPE-LOCALITY.—La Paz. Entre Rios, Argentina (24 November 1951; Wittmer, collector).

REMARKS.—This species, with its long elytra somewhat resembles *M. californicum* Crotch in both size and shape. A distinctive feature, however, is the way the sides of the clypeus curl upward so that, when viewed from above, a little peak is observed in front of the eye.

Metachroma mendozae, new species

FIGURE 94

DESCRIPTION.—Between 4.5 and 5.5 mm in length, oblong oval, shining, dark yellowish brown with occiput of head, scutellum, sutural edges, joints 6–11 of antennae, tarsi, breast, and abdomen dark brown to piceous, pronotum often impunctate, elytra with very fine striate punctures in basal half, impunctate in apical half.

Head broad with interocular space more than half width of head, no transverse sulcus separating clypeus, which is broad and rectangular with anterior margin nearly straight across over labrum, surface finely punctate, more coarsely so on clypeus, in some a median depression on front, occiput and jaws piceous. Antennae with two basal joints yellow-brown, joints 3–5 deeper brown and remainder piceous. Prothorax approximately a third wider than long, strongly convex, with rounded sides and small tooth at anterior and basal angles; surface mirror-smooth in some, very finely punctate in others, deep yellowish brown. Scutellum dark brown to piceous, Elytra not much wider than prothorax and approximately 2.5 times as long, smoothly convex with only a short depression marking humeral sulcus, and with small humeral prominences;

striate punctures very fine and not impressed, disappearing after middle, apical half mirror-smooth, deep yellowish brown with sutural edges usually darker. Body beneath with breast and abdomen and often middle of prosternum dark, legs deep yellowish brown, tarsal joints dark brown or piceous, femora not toothed, claws with short basal tooth. Length, 4.5–5.5 mm; width, 2.3–2.6 mm.

TYPE.—Male, USNM 70697, with five paratypes.

TYPE-LOCALITY.—San Rafael, Mendoza, Argentina (19 November 1944; Juan Daguerre, collector).

REMARKS.—This species of *Metachroma* comes from the farthest south of any member of the genus so far described. In Daguerre's collection it is determined as *Balya jacobyi* Lefèvre, but it is a species of *Metachroma* with an unusually large head and unusually fine elytral punctation that is visible only in basal half of the elytra. There appears to be a slight difference in the shape of the first two tarsal joints, which are more slender than is usual in the genus. I have sent a specimen of this species to the British Museum (Natural History) for comparison with *Balya picta* (Perty) and R. T. Thompson wrote that it is not a species of *Balya,* in which genus the claws are appendiculate, a fact that Lefèvre was aware of, as he described the genus with that character (Lefèvre, 1885, p. 92).

Key to Species from the Bahamas

1. Shining black with paler antennae, legs, and apex to elytra. (Cat Island) ..... ***M. felis*** Blake
   Shining brown 2
2. Deep reddish brown, with polished, very finely punctate pronotum. (Nassau)
   M. nassauense Blake
   Pale yellow-brown, with densely punctate pronotum. (Turks and Caicos Islands)
   M. haydeni Blake

Metachroma felis Blake

FIGURE 146

Metachroma felis Blake, 1948, pp. 276, 277.

DESCRIPTION.—About 5 mm in length, oblong oval, shining black with pale antennae, legs, and apex of elytra.

Head with interocular space less than half its width, shining black over occiput and front, alutaceous on clypeus, densely punctate, no transverse sulcus separating clypeus, a short median vertical line on front, mouthparts reddish or yellowish brown. Antennae extending to middle of elytra, slender, pale with distal joints deeper in color. Prothorax almost twice as wide as long, with arcuate sides and small tooth at each angle, surface polished, with obsolete and moderately dense punctation. Scutellum shining black. Elytra approximately three times as long as prothorax, lustrous black except for a narrow pale rim along the apex, striate punctures distinct in basal half becoming indistinct after the middle and vanishing at apex, rows of punctures on sides regular but short. Body beneath deep brown, legs pale with narrowed apex of femora dark-ringed and a dark streak down base of tibiae, femora toothed.

TYPE.—Male, MCZ 27827, with one female paratype.

TYPE-LOCALITY.—Arthurstown, Cat Island, Bahamas (23 July 1935; W. J. Clench, collector).

REMARKS.—This is one of the species closely related to *M. adustum* Suffrian. It differs from that species in having only a narrow pale apex to elytra and no pale area along the sides or on the humeri, as is the case in the Florida and Cuban beetles; also, it is slightly larger, and the tip of the aedeagus is broader. The elytral striae are not so impressed as in the other closely related species. In the USNM collection is a female from Eleuthera Island, Bahamas, collected in July by H. F. Wickham, that seems to be the same species.

Metachroma nassauense Blake

FIGURE 143

Metachroma nassauense Blake, 1962, pp. 175, 176.

DESCRIPTION.—About 5.5 mm in length, broadly oblong oval, shining, deep reddish brown, pronotum polished, elytra strongly punctate, femora toothed.

Head with interocular space about half its width, densely and rugosely punctate, shining, deep reddish brown. Antennae yellowish brown, very slender, extending below humeri. Prothorax broad and convex with rounded sides, polished deep reddish brown, very minutely punctate. Scutellum dark brown. Elytra

broad and convex, polished, with rows of coarse punctures becoming finer over slightly elevated basal callosities and toward apex; entirely deep reddish brown. Body beneath reddish brown with the abdomen paler yellowish brown, space between anterior coxae coarsely punctate; legs reddish brown, femora coarsely punctate, pubescent at apical narrowing, and toothed; claws with short basal tooth. Length, 5.7 mm; width, 3.0 mm.

TYPE.—Female, USNM 65895.

TYPE-LOCALITY.—Nassau, Bahamas.

REMARKS.—This species is very similar to *M. adustum* Suffrian from Cuba, but it is a paler reddish brown instead of piceous and does not have paler sides and apex to the elytra; in addition, the single specimen known is considerably larger.

Metachroma haydeni Blake

FIGURE 144

Metachroma haydeni Blake, 1965, p. 34.

DESCRIPTION.—About 3.5 mm in length, oblong oval, shining, not at all alutaceous, entirely pale yellow-brown, prothorax with disc densely punctate except about margin and base, nearly as broad as elytra, elytra with rows of striate punctures becoming faint below middle.

Head with the occiput and front shallowly and coarsely punctate, clypeus more distinctly so, pale yellow-brown with darker mouthparts. Antennae not reaching middle of elytra, distal joints darker than basal ones, which are pale yellow. Prothorax almost twice as broad as long and nearly as broad as elytra, not very convex, with curving sides, densely punctate in anterior half, on sides and base nearly impunctate, entirely pale yellow-brown. Scutellum pale brown. Elytra three times as long as prothorax, with distinct basal callosity and transverse depression below, a short intrahumeral sulcus, striate punctation distinct to middle of elytra but disappearing before apex, shining, entirely pale yellow-brown. Body beneath and legs shining pale yellow-brown. Length, 3.5 mm; width, 2.0 mm.

TYPE.—Female, in AMNH.

TYPE-LOCALITY.—West Caicos Island, Turks and Caicos Islands (taken at light, 4 February 1953, by E. B. Hayden, L. Giovannoli, and G. B. Rabb, on Van Voast-American Museum of Natural History Bahama Islands Expedition).

REMARKS.—This species closely resembles *M. obesum* Blake from the Dominican Republic in shape, but it lacks the elytral spotting and the darker pronotum.

Key to Species from Cuba

1.	Head with hornlike projection on each side of clypeus	***M. cornutum*** Blake
	Head without hornlike projection on clypeus	2
2.	Elytra more than three times as long as prothorax	3
	Elytra not more than three times as long as prothorax	7
3.	Elytra with a lateral costa	***M. gracile*** Blake
	Elytra without a lateral costa	4
4.	Pronotum with vitta on each side	***M. moaense*** Blake
	Pronotum without vitta	5
5.	Elytra with punctation not visible to apex	***M. longicornis*** Blake
	Elytra with punctation visible to apex	6
6.	Elytra narrowly elongate	***M. oteroi*** Blake
	Elytra more ovate	***M. acunai*** Blake
7.	Length, 2.0–3.3 mm	8
	Length, 3.5 mm or more	12
8.	Aedeagus 2-pronged at apex	***M. testaceum elachistum*** Blake
	Aedeagus not 2-pronged at apex	9
9.	Aedeagus narrow at tip	10
	Aedeagus broad	11
10.	Elytra pale with dark markings, aedeagus very long and narrow	***M. ensiforma*** Blake
	Elytra entirely deep reddish brown, aedeagus not so long and narrow	***M. castaneum*** Blake

11. Head without sulcus dividing front from clypeus, prothorax not twice as wide as long ***M. imitans*** Blake
    Head with sulcus dividing front from clypeus, prothorax twice as wide as long ***M. simile***, new species
12. Front femora with unusually large conspicuous tooth 13
    Front femora either without tooth or with an inconspicuous one 14
13. Aedeagus with tip not pointed ..... ***M. obscuricollis***, new species
    Aedeagus with tip pointed ..... ***M. odontotum***, new species
14. Striate punctures on elytra distinct to apex 15
    Striate punctures on elytra not distinct to apex 16
15. Large (5.5–6.5 mm), either entirely piceous or yellow-brown with many spots ***M. multipunctatum*** Blake
    Smaller (4.5 mm), entirely piceous except antennae and tarsi ..... ***M. schwarzi*** Blake
16. Elytra with short rows of striate punctures in basal half 17
    Elytra with striate punctures fading after middle 18
17. Small (3.5–3.8 mm), yellow-brown with darker markings ..... ***M. maniocae*** Blake
    Larger (4.5 mm), piceous with pale apex to elytra and pale legs ..... ***M. xanthacrum*** Blake
18. Interocular space more than a third width of head 19
    Interocular space approximately a third width of head 20
19. Prothorax about a fourth wider than long, aedeagus unusually dark ..... ***M. longitarsus*** Blake
    Prothorax about a third wider than long, aedeagus pale ..... ***M. adustum*** Suffrian
20. Large (6.5 mm), eyes very large, elytral punctures fine ..... ***M. grande*** Blake
    Smaller (4.5 mm), eyes not unusually large, punctation coarse except over basal umbones and at apex ..... ***M. zayasi*** Blake

Metachroma adustum Suffrian

FIGURES 20, 110, 111

Metachroma adustum Suffrian, 1866, pp. 339, 340.—Blake, 1930, pp. 214, 215.
Metachroma terminale Horn, 1892, p. 215.

DESCRIPTION.—From 3.4 to 4.9 mm in length, oblong oval, lustrous, usually piceous black but varying from deep reddish brown to piceous and occasionally elytra deep brown with a wide lateral piceous vitta not reaching apex, and dark sutural edges, apex paler yellowish brown, pronotum nearly impunctate, elytra with striate punctation fading away at apex, femora minutely toothed.

Head with interocular space half width of head, deep brown to piceous, finely and obsoletely punctate on front, a short median linear depression on vertex, no definite sulcus separating front from clypeus, latter alutaceous and more distinctly punctate, basal margin widely emarginate over pale yellow-brown labrum. Antennae yellowish brown, often with deeper brown apical joints. Prothorax convex, nearly as broad as elytra, a third wider than long with widely rounded sides, lustrous deep brown or piceous, almost impunctate. Scutellum dark. Elytra usually deep piceous black with a paler reddish or yellowish brown apex, sometimes paler along sides and occasionally paler with a broad piceous vitta along sides not reaching apex, and dark sutural edges, rest of elytra deep reddish brown; striate punctures regular and fine, especially over basal callosities, fading at apex but well developed in several rows on sides. Body beneath in dark specimens entirely dark but in paler specimens reddish brown, legs also varying in color, often femora with dark apex, tibiae and tarsi yellowish or reddish brown, femora with minute tooth, claws with short basal tooth. Length, 3.4–4.9 mm; width, 1.7–2.5 mm.

TYPE.—In Havana? (Type of *M. terminale* Horn in PAS).

TYPE-LOCALITY.—"Cuba" (Of *Metachroma terminale* Horn, "Florida, Biscayne Bay and Key West").

OTHER LOCALITIES.—*Cuba:* Cayamas, E. A. Schwarz; Baragua, on rose petals; Bahia Honda, Wickham; San Vicente, Pinar del Rio, 6–10 July 1956, C. and P. Vaurie; *Grand Cayman:* D. M. Cameron. *Andros:* Fresh Creek, May, June, W. M. Mann. *Florida:* Miami Beach, H. B. Bailey, 1–5 May 1922; *Big Pine Key:* Barber and Schwarz.

REMARKS.—This species, described by Suffrian from Gundlach's collection as "fuscous brown," is ordinarily deep piceous with the apex of the elytra (according to Suffrian) "more dilute". As in other species of the genus, there is considerable color variation. Occasionally the elytra are deep brown with a wide lateral

piceous vitta not reaching the apex, and the suture also is widely dark. In an earlier paper I synonymized *Metachroma terminale* Horn with *M. adustum,* and I still believe that, at most, Horn's species is only a subspecies. There is a similar case in Blatchley's *M. testaceum* from Florida and in *M. testaceum elachistum* Blake from Cuba. In both, the Cuban beetles are smaller. In *M. terminale* the beetles range from 4.2 to 4.9 mm in length, and the Cuban beetles from 3.4 to 4.4 mm. This difference in size is practically the only difference I can find.

Metachroma schwarzi Blake

FIGURE 119

Metachroma schwarzi Blake, 1948, p. 276.

DESCRIPTION.—About 4.5 mm in length, broadly oblong oval, shining black with reddish brown mouthparts, antennae, and tarsi; pronotum very finely punctate, elytra with striate punctures distinct to apex.

Head with interocular space approximately half its width, occiput smooth and shiny, clypeus alutaceous, densely punctate, no transverse line separating clypeus. Antennae not reaching middle of elytra, deep reddish brown. Prothorax not twice as wide as long with arcuate sides and small tooth at each angle, surface polished, finely punctate. Elytra entirely dark, shining, a very faint transverse depression below intrahumeral sulcus; striate punctures coarse and distinct to apex, rather deeply impressed. Body beneath shining piceous with tip of abdomen a little paler; legs dark with pale tarsi, a tiny tooth on hind femora. Length (4.4–4.5 mm; width, 2.5 mm.

TYPE.—Female, USNM 58778. One female paratype in MCZ.

TYPE-LOCALITY.—Cayamas, Santa Clara Province, Cuba (E. A. Schwarz, collector).

REMARKS.—Dr. Schwarz himself labeled this species as new. It strongly resembles *M. adustum* Suffrian but has entirely dark elytra and black legs. The elytral punctation is coarser and distinct to the apex and the eyes are more widely set than in *M. adustum.* It differs from *M. zayasi* Blake in being more strongly punctate as well as being shorter and broader, and it differs from the dark form of *M. multipunctatum* Blake in having a narrower prothorax and being, in general, a smaller beetle.

Metachroma xanthacrum Blake

FIGURE 112

Metachroma xanthacrum Blake, 1947, pp. 311, 312.

DESCRIPTION.—About 4.5 mm in length, shining piceous, with antennae, legs, margin and apex of elytra, and apex of abdomen pale; head and prothorax very finely and sparsely punctate; elytra with only the sutural row of punctures entire, the short rows of punctures below basal callosity becoming progressively shorter toward sides.

Head with interocular space less than half width of head; eyes large, occiput and front with obsolete punctation, producing a wrinkled appearance, no groove separating clypeus, which is deep reddish brown, a pale spot near eye on vertex. Antennae pale, extending below humeri. Prothorax not twice as wide as long, with rounded sides and tooth at each angle, surface very smooth and shining, with a few indistinct scattered punctures; piceous except for a lighter reddish brown area along anterior margin. Elytra with small humeri and a basal callosity with a depression below in which there are short rows of coarse punctures, the sutural striae alone reaching apex, and others becoming shorter toward the side; dark piceous except for pale sides and broad pale apex and two reddish spots on each side of scutellum at base. Body beneath deep reddish brown with paler apical segments of abdomen; legs pale except at apex of femora and along sides at base of tibiae where there is a dark streak. All femora minutely toothed; claws with long basal tooth. Length, 4.5 mm; width, 2.4 mm.

TYPE.—Female, MCZ 27680.

TYPE-LOCALITY.—Loma del Gato, Cobre Range, Oriente Province, Cuba, at about 3,000 feet (3–7 July 1936; P. J. Darlington Jr., collector).

REMARKS.—This species lies between *M. adustum* Suffrian from Cuba and *M. wolcotti* Bryant from Haiti. It resembles the former in general coloration, having a pale apex to the elytra, but it lacks the pronounced elytral striation in which the rows of punctures are entire. In this respect it resembles *M. wolcotti,* which differs in being entirely dark with dark legs and dark elytra. It is possible that *M. xanthacrum* has a paler color phase, as the two pale spots at the base of each elytron and the pale apex suggest that it may be the dark form of a spotted species.

Metachroma longitarsus Blake

FIGURES 123, 125

Metachroma longitarsus Blake, 1946, pp. 24, 26; 1948, p. 278.

DESCRIPTION.—Approximately 5.5 mm in length, elongate oblong ovate, shining, varying from being deep reddish brown with piceous markings on the pronotum and elytra and darkened apices to femora to being entirely black except the mouthparts, antennae, and tarsi; elytral striate punctures not impressed or dense, and becoming indistinct at apex.

Head with interocular space less than half width of head, a transverse sulcus separating front from clypeus and a vertical median depression on vertex, clypeus alutaceous, punctate, front smooth with scattered punctures, a dark streak down occiput, jaws dark. Antennae reddish brown, extending below humeri. Prothorax about a fourth wider than long, with arcuate sides and a seta-bearing tooth at each corner; surface polished, finely but not densely punctate in middle, smooth about edges, deep reddish brown with large dark areas on each side, or in dark specimens entirely piceous. Scutellum dark. Elytra parallel-sided and rather convex with well-developed humeri and a deep sulcus within, and a somewhat swollen basal callosity; shining deep reddish brown with piceous humeri, dark streaks along striae in middle at base and two large spots down the middle of each elytron and another large spot on the side between them, in dark specimens elytra entirely piceous. Body beneath more or less piceous, polished, lightly pubescent; legs pale with apex of femora dark in pale specimens, legs more or less dark in dark ones with tarsal joints reddish brown. Posterior femora with a minute tooth; claws with tiny basal tooth. Length, 5.4 mm; width, 2.8 mm.

TYPE.—Female, MCZ 27355.

TYPE-LOCALITY.—South side of Pico Turquino, Oriente Province, Cuba, at 3,000–5,000 feet (June 1936; P. J. Darlington, Jr., collector).

REMARKS.—This is one of the larger species of *Metachroma* having at least two color forms. It is nearly as large as *M. grande* Blake, also from Oriente Province, Cuba, and the dark form can be distinguished from that species by its smaller and narrower prothorax, not so large eyes, and not so prominently toothed femora.

Metachroma zayasi Blake

FIGURE 117

Metachroma zayasi Blake, 1958, pp. 92, 93.

DESCRIPTION.—About 4.5 mm in length, oblong oval, lustrous black with antennae, tarsi, and body beneath deep brown; pronotum nearly impunctate, elytra with striate punctation most developed around (but not over) depression below basal callosities, becoming faint towards apex.

Head with interocular space approximately a third width of head, occiput finely punctate, a short median line on vertex and a trace of transverse line dividing front from clypeus, which is alutaceous and with scattered coarse punctures. Antennae not reaching middle of elytra, deep brown. Prothorax nearly twice as wide as long with arcuate sides and inconspicuous tooth at each angle, convex, very finely punctate. Scutellum deep brown. Elytra nearly three times as long as prothorax, lustrous, striate punctation not very distinct over basal callosities but becoming large and coarse in depression below and on side and faint toward apex. Body beneath and legs shining dark brown, almost piceous, with tarsal joints paler. Femora toothed; claws with short basal tooth. Length, 4.5 mm; width, 2.5 mm.

TYPE.—Male, USNM 64536.

TYPE-LOCALITY.—Sierra del Cristal, Oriente Province, Cuba (May 1955, F. de Zayas, collector).

REMARKS.—This species differs from *M. schwarzi* in being less coarsely punctate. In *M. schwarzi* the striate punctures are visible to the apex. The dark form of *M. multipunctatum* is larger and the striate punctures are even deeper and coarser along the sides and apex and over basal callosities.

Metachroma grande Blake

FIGURE 121

Metachroma grande Blake, 1958, p. 98.

DESCRIPTION.—About 6.5 mm in length, elongate oblong oval, shining piceous black with reddish brown antennae, tarsal joints and head; occiput and prothorax finely punctate, striate punctures on elytra except in depression below basal callosity fine and becoming faint on sides and at apex; eyes very large.

Head with interocular space less than half width of head, eyes large, a median line on vertex, front finely

and sparsely punctate, clypeus wrinkled, mouthparts paler reddish brown. Antennae reddish brown with seventh joint darker than the other joints (in only specimen examined). Prothorax not twice as broad as long, moderately convex with rounded sides and small tooth at each angle, a slight transverse depression over head, surface lustrous with fine, scarcely discernible punctures, entirely dark piceous. Scutellum piceous. Elytra almost three times as long as prothorax, with an intrahumeral sulcus and transverse depression below basal callosities, striate punctures larger in this depression and thence becoming finer and at sides and apex almost vanishing; surface lustrous black. Body beneath and legs piceous, tibiae at apex and tarsal joints deep reddish brown, femora with small tooth. Length, 6.5 mm; width, 3.2 mm.

TYPE.—Female, in collection of F. de Zayas, Cuba.

TYPE-LOCALITY.—Yunque, Oriente Province, Cuba (July 1955; F. de Zayas, collector).

REMARKS.—This species is one of the largest of the black species of West Indian *Metachroma*. Its large eyes, very narrow interocular space, elongate, lightly punctate elytra, and toothed femora sufficiently differentiate it from the other black species.

Metachroma cornutum Blake

FIGURE 107

Metachroma cornutum Blake, 1948, p. 93.

DESCRIPTION.—About 3.5 mm in length, oblong oval, lustrous deep yellowish brown, antennae with apical joints darker brown, head with a knobby projection on either side of clypeus anteriorly, pronotum impunctate with only slightly curved sides, elytra with striate punctation in intrahumeral sulcus, transverse depression below basal umbone and along suture, surface otherwise impunctate.

Head with interocular space half its width, polished, impunctate, clypeus wide with wide shallow emargination anteriorly over labrum and a knobby projection at each side of this emargination forming two horns projecting forward when viewed from above. Antennae extending well below humeri, outer joints deeper brown. Prothorax not very convex with only slightly rounded sides and a small tooth at each angle, surface lustrous, impunctate and without darker markings. Scutellum yellowish brown. Elytra very shiny, a small umbone at base and transverse depression below in which striate punctures are visible, otherwise on sides and at apex punctation is very faint or absent; surface very smooth, shiny and deep yellowish brown. Body beneath shining reddish brown with abdomen and legs a little paler. Femora not toothed; claws with distinct basal tooth. Length, 3.5 mm; width, 1.8 mm.

TYPE.—Male, USNM 64532.

TYPE-LOCALITY.—Cayamas, Cuba (5 October; E. A. Schwarz, collector).

REMARKS.—Only one specimen is known, but the hornlike excrescences on the anterior margin of the clypeus make this species easily recognizable.

Metachroma gracile Blake

FIGURE 106

Metachroma gracile Blake, 1937, pp. 67, 68.
Metachroma cavicollis Blake, 1960, pp. 97, 98.

DESCRIPTION.—Between 6.0 and 6.5 mm in length, elongate oblong, yellowish or pale reddish brown, feebly shining (one specimen distinctly alutaceous), head and prothorax densely and strongly punctate, elytra more than three times as long as prothorax and tapering to the apex, with small, closely set striate punctures visible to apex, in female a well-developed lateral costa, not so evident in male.

Head with interocular space more than half width of head, a faint transverse depression between front and clypeus, clypeus broad and short with wide shallow emargination over labrum, front often with a shallow median linear depression ending on vertex in a rounded hole; surface of clypeus distinctly alutaceous and finely punctate, front densely and rather coarsely punctate. Antennae yellowish or reddish brown, extending below humeri. Prothorax not twice as wide as long with well-rounded, sometimes almost angulate sides, and small tooth at basal and anterior angles, disc with more or less pronounced depressions on each side and over head, surface strongly and densely punctate, sometimes alutaceous, yellowish or reddish brown with lateral margins piceous. Scutellum pale. Elytra more than three times as long as prothorax, narrowly elongate and tapering to apex, with small prominent humeri, short intrahumeral depression and faint depression below the slight basal callosities, in female a pronounced lateral fold or costa, especially developed in apical half, which in male is not so evident; striate punctures small, closely set and somewhat impressed, in straight lines to apex, surface in some specimens

also alutaceous. Body beneath yellowish or reddish brown, very lightly pubescent; legs pale. Femora with small tooth; claws with short basal tooth. Length, 6.0–6.5 mm; width, 2.5–2.7 mm.

TYPE.—Male, USNM 51838. (Type of *M. cavicollis*, USNM 64671.)

TYPE-LOCALITY.—Santiago de las Vegas, Cuba (1919; "B.T.B."). (Type locality of *M. cavicollis*, Sierra Cajalbana, Pinar del Rio Province, Cuba, June 1956, F. de Zayas).

OTHER LOCALITIES.—Buenos Aires, Trinidad Mountains, Cuba, 3 May 1932, J. Acuña.

REMARKS.—As in so many species of this genus there is considerable variability, in this case in the difference between the sexes. *M. gracile* was described from a male without strong pronotal depressions or a pronounced elytral costa. *M. cavicollis* was described from a female in which the surface is distinctly alutaceous, has well-marked pronotal depressions, and elytra with a strong lateral costa. In the light of my study of the genus as a whole, I have come to recognize this variability not only between the sexes but between individual specimens, and I feel certain that *M. cavicollis* is merely the female of *M. gracile*.

Metachroma oteroi Blake

FIGURE 108

Metachroma oteroi Blake, 1944, p. 252.

DESCRIPTION.—About 5.0 mm in length, elongate oblong oval, moderately shining, pale yellow-brown with a dark depressed line running down from occiput to vertex, dark mouthparts, dark lateral edges both on prothorax and elytra; elytra long and narrow without any depressions and with straight lines of striate punctures.

Head pale with dark mouthparts and dark median occipital depression, surface moderately shining, very finely alutaceous and with numerous distinct punctures. Antennae extending below humeri, reddish brown with apices of joints darker. Prothorax pale with piceous margins, shining, moderately convex, sides arcuate, a sharp tooth at each angle, surface moderately, densely, and distinctly punctate. Elytra elongate, without depressions or elevations, the small striate punctures running in regular straight lines to apex; between striae intervals very finely and not densely punctate; margin in basal half piceous. Body beneath and legs pale yellow-brown, shining, finely and sparsely pubescent. Front femora distinctly toothed, hind femora with very faint indication of toothing, scarcely distinct enough, however, to be definitely called toothed. Length, 5.3 mm; width, 2.0 mm.

TYPE.—? Male, USNM 46948.

TYPE-LOCALITY.—Santiago de las Vegas, Cuba (16 May 1932; Angel Otero, collector).

REMARKS.—*Metachroma oteroi* is one of the narrowly elongate species. It is related to *M. gracile* Blake, also from Cuba, but it differs from that species in not having the hind femora toothed and in lacking any elytral costae.

Metachroma acunai Blake

FIGURE 104

Metachroma acunai Blake, 1946, p. 22.

DESCRIPTION.—Between 3.0 and 4.0 mm in length, oblong oval, shining reddish brown, head with a darker occiput, each elytron with four more or less distinct spots down the middle, the lowest near suture; prothorax sparsely but distinctly punctate, elytral striate punctures distinct to apex.

Head with interocular space approximately half width of head, a transverse sulcus dividing clypeus from front, clypeus coarsely and densely punctate, a median groove on front at vertex, occiput finely and not densely punctate and tending to be darker. Prothorax less than a third wider than long, sides arcuate and a small tooth at each angle, a transverse depression over head, surface finely and not densely punctate. Elytra wider than prothorax and about three times as long, with striate punctures distinct to apex and coarser in depression below humeri; each elytron with four spots (which in one specimen are small and indistinct), these spots located (1) in middle near base, (2) just below basal spot a little more toward humerus, (3) in the middle of elytron, (4) near suture at two-thirds the distance from base to apex. Body beneath shining reddish brown; femora without tooth. Length, 3.6–3.8 mm; width, 1.3–1.5 mm.

TYPE.—Male, USNM 57745. One female paratype in MCZ.

TYPE-LOCALITY.—Moa, Oriente Province, Cuba (13–22 April 1945; J. Acuña, collector).

REMARKS.—The distinct elytral punctation, visible to the apex, is a distinguishing feature of this small

species. In markings it somewhat resembles *M. rosae* Bryant, but that is a larger species with a larger, more-polished pronotum.

Metachroma simile, new species

FIGURES 120, 122

DESCRIPTION.—Between 2.5 and 3.0 mm in length, oblong oval, lustrous yellow-brown, often with dark reddish brown to piceous markings in the form of spots on the elytra, or darker prothorax that varies from a reddish brown band to being entirely piceous; striate punctation much reduced, to being only in basal depression and along suture.

Head with interocular space more than half width of head, occiput smoothly rounded, very finely punctate, varying from reddish brown to piceous, a sulcus dividing front from clypeus with a short median linear depression on vertex, clypeus alutaceous and very finely punctate, jaws dark. Antennae long and slender, yellow-brown, in darker specimens with apical joints partly dark. Prothorax approximately twice as wide as long, sides arcuate with a small tooth at each angle, a depression over head, polished, usually minutely punctate but sometimes more distinctly so; varying in color from deep reddish brown to piceous. Scutellum deep reddish brown to piceous. Elytra three times as long as prothorax, polished, only short remnants of striate punctures, apical half smooth and impunctate, varying in color, from being entirely yellow-brown to having reddish brown to piceous spots in intrahumeral sulcus and below in transverse depression and another spot along side and a fourth below middle near suture, often two other submarginal spots, some of these spots often missing. Body beneath and legs pale, femora not toothed, claws with short basal tooth. Length, 2.5–3.0 mm; width, 1.5–1.6 mm.

TYPE.—Male, USNM 70699. Fifteen paratypes in USNM; four paratypes in MCZ.

TYPE-LOCALITY.—Bahia Hondo, Cuba (1–3 June; Wickham, collector).

OTHER LOCALITIES.—Cuba: Pinar del Rio, C. Parsons, Baker; Baños de San Vicente, C. Parsons; Santiago de las Vegas, A. Otero.

REMARKS.—Specimens in USNM have been labeled by Schwarz as *M. lituratum* Suffrian, but I am unable to tell from Suffrian's description whether or not this is that species. Suffrian described three very similar species—*M. lituratum, M. laeviusculum,* and *M. sordidum*—from Cuba, and it is quite possible that the present species may be any one of these three, but until someone can examine Suffrian's types and above all dissect for the aedeagus, these species will remain unknown. This species is about the same size as *M. testaceum elachistum* Blake, also from Cuba, but the elytral punctation in the latter is distinct to the apex and there is little variation in the coloring.

Metachroma maniocae Blake

FIGURE 113

Metachroma maniocae Blake, 1966, p. 216.

DESCRIPTION.—Approximately 3.5 mm in length, oblong oval, shining, pronotum very finely punctate, elytra with small striate punctures becoming faint over basal callosities, toward apex, and on sides; yellow-brown, head with a broad dark plaga, pronotum usually with a more or less well-defined dark transverse fascia, elytra with dark streak down intrahumeral sulcus ending in a rounded dark spot, often connected with a marginal dark streak, another spot below this on side.

Head with interocular space half width of head, a broad dark median area from occiput down front, front shining, with scattered punctures, clypeus separated by well-marked transverse sulcus and alutaceous with denser and coarser punctures. Antennae extending below humeri, outer joints darker. Prothorax moderately convex with widely curved sides, a depression behind eyes, polished and with fine, not dense punctures, pale yellow-brown with a broad dark fascia. Scutellum dark. Elytra with small striate punctures fading out over basal callosities, sides, and apex, surface very shiny, pale yellow-brown with a dark streak down intrahumeral sulcus ending in a broad spot, often connected with marginal dark area, below this on the side another spot, this often faint or even lacking. Body beneath sometimes dark reddish brown, in paler specimens yellowish brown, legs with a slight darkening at base of tibiae, femora not toothed, claws with a long tooth. Length, 3.5–3.8 mm; width, 1.9–2.0 mm.

TYPE.—Male, USNM 68198, with twelve paratypes.

TYPE-LOCALITY.—Cuba.

OTHER LOCALITIES.—*Cuba:* Soledad, Cienfuegos, P. J. Darlington, G. Salt, May 1925; Cayamas, 5 Sep-

tember, E. A. Schwarz; Jovellanos, Matanzas, attacking cassava, 10 May 1941, E. V. Echemendia.

REMARKS.—There is little variation in the markings of the specimens examined, but some darker ones have larger elytral spots and an extra spot near the suture in the apical half of elytron. One pale specimen is without the lower lateral dark spot.

Metachroma moaense Blake

FIGURE 114

Metachroma moaense Blake, 1962, p. 176.

DESCRIPTION.—Approximately 3.0 mm in length, oblong oval, shining pale yellow-brown, with a vitta on each side of pronotum and several reddish brown spots on the elytra, pronotum densely and finely punctate, elytra with striate punctures distinct to the apex.

Head with interocular space a little less than half width of head, occiput with a dark median line down front, impunctate, pale, clypeus rugosely punctate, jaws brown. Antennae with five distal joints dark, basal ones paler. Prothorax with a rather uneven surface, a depression over head, densely and moderately finely punctate, shining pale yellow-brown with a rather faint reddish brown vitta on each side. Scutellum pale. Elytra strongly striate punctate, punctures distinct to apex, shining yellow-brown with a faint reddish brown spot along side and three or four spots down middle of each elytron. Body beneath entirely pale, legs pale. Femora not toothed, claws with tooth half the length of claw. Length, 3.2 mm; width, 1.5 mm.

TYPE.—Female, USNM 65896.

TYPE-LOCALITY.—Moa, Oriente Province, Cuba (Acuña, collector).

REMARKS.—The color pattern of this small species somewhat resembles that of *M. fenestratum* Blake, from Puerto Rico, which also has vittate markings on the pronotum, but the elytra in this Cuban species are much more coarsely punctate.

Metachroma multipunctatum Blake

FIGURES 115, 116

Metachroma multipunctatum Blake, 1958, pp. 96, 97.

DESCRIPTION.—Between 5.5 and 6.5 mm in length, broadly oblong oval, lustrous, pronotum very finely punctate, elytra with large, deeply set, striate punctures visible to apex, two of the four specimens deep chocolate brown with a large spot on each side of pronotum, a row of three dark spots across base of each elytron, one dark spot below humerus, another one below that, at middle, and an irregular row of four dark spots across each elytron below middle, suture in part dark; in the other two specimens pronotum and elytra entirely dark; femora in paler specimens with apex dark and tibiae dark at base, in dark specimens legs entirely dark.

Head deep brown or piceous with interocular space about a third the width of head, clypeus coarsely, even rugosely, punctate, with anterior margin over labrum widely emarginate, sometimes a faint line separating clypeus from front, usually a short median line on vertex. Antennae reddish brown not reaching middle of elytra. Prothorax moderately convex, but not quite twice as wide as long at widest point, with widely arcuate sides and small tooth at each angle, a depression over occiput anteriorly, surface lustrous, finely and not densely punctate, in pale specimens deep reddish brown with a large darker area nearly covering each side, leaving only a small area anteriorly and at base and a median line paler, in dark specimens pronotum entirely piceous. Scutellum piceous. Elytra broad and moderately convex with only a short intrahumeral sulcus, coarsely and deeply striate punctate with some irregular punctures often between rows at middle, punctation especially deep and distinct on sides and at apex, surface lustrous deep brown with darker spots in paler specimens. In dark specimens elytra entirely piceous. Body beneath dark in all specimens, femora in pale specimens pale with dark apex, tibiae dark in basal half, in dark specimens legs entirely dark; front and hind femora with small tooth, claws with long tooth. Length, 5.5–6.5 mm; width, 3.0–3.7 mm.

TYPE.—Female, USNM 64535. Three female paratypes in USNM; one paratype in collection of F. de Zayas.

TYPE-LOCALITY.—Sierra del Cristal, Oriente Province, Cuba (May 1955; F. de Zayas, collector).

OTHER LOCALITY.—"Somorrostro, Habana, 1948."

REMARKS.—This is still another species with at least two color forms, one pale with spots and the other entirely dark. The unusually large size and broadly ovate shape together with the coarse elytral striate punctures, which are distinct to the apex, characterize this species.

Metachroma obscuricollis, new species

FIGURE 105

DESCRIPTION.—From 3.5 to 4.8 mm in length, elongate oblong oval, head and prothorax dull alutaceous yellowish or reddish brown, antennae, legs, abdomen, and elytra paler yellow-brown, elytra often with a reddish brown suture, anterior femora with large tooth.

Head yellowish or reddish brown with piceous jaws, alutaceous with obscure shallow punctures, no median depression on front, a line separating front from clypeus, clypeus short and broad with shallowly emarginate anterior margin over labrum. Antennae extending below humeri, yellow-brown. Prothorax not much wider than long, moderately convex, with arcuate sides and prominent tooth anteriorly behind eye, tooth at basal angle not so conspicuous, surface dull alutaceous with scattered fine punctures, usually deep reddish brown but in one specimen yellowish brown with deeper reddish brown median area. Scutellum dark reddish brown. Elytra yellowish brown, often with reddish brown sutural edges and margin; striate punctures small, closely set and visible to apex in regular rows; elytra with a faint depression in intrahumeral sulcus and below basal callosities. Body beneath with prosternum and breast deeper reddish brown, abdomen and legs pale, all femora toothed but fore femora with large prominent tooth; claws with short basal tooth. Length, 3.5–4.8 mm; width, 1.8–2.0 mm.

TYPE.—Male, USNM 70700, with three paratypes.

TYPE-LOCALITY.—Cayamas, Cuba (E. A. Schwarz, collector).

REMARKS.—The narrow, elongate shape, dull alutaceous surface of the prothorax, and large tooth on anterior femora distinguish this species. Dr. Schwarz has labeled it *M. suturalis* Suffrian, but Suffrian's description of that species as having the thorax with a greenish shimmer certainly does not apply to this beetle. In fact, I cannot identify any of Suffrian's six species of *Metachroma* from Cuba, except *M. adustum*, with any certainty. There are more than 20 species in Cuba, most of which have considerable variability in markings and color, and with this variability they can easily be confused in Suffrian's descriptions. In *Metachroma*, small morphological differences such as—in this species—the large tooth on the anterior femora and the conspicuous tooth at the anterior angle of the prothorax are of more importance in distinguishing the species than any color phase.

Metachroma imitans Blake

FIGURE 103

Metachroma imitans Blake, 1947, pp. 310, 311.

DESCRIPTION.—About 2.5 mm in length, ovate, shining deep reddish brown with paler legs and antennae; head and prothorax distinctly punctate; elytral striate punctation not very distinct over basal callosities or in apical half.

Head with interocular space nearly half as wide as head, shining and lightly punctate over occiput, more coarsely and densely punctate on front and clypeus; no groove separating clypeus, labrum paler, jaws with deep brown edge. Antennae pale, extending below humeri. Prothorax not quite twice as wide as long, with arcuate sides and small tooth at each angle, a depression over head, shining deep reddish brown and a little paler over head, moderately closely and distinctly punctate. Elytra very shiny deep brown, with prominent humeri, a transverse depression below basal callosities, striate punctures not distinct to apex and nearly vanishing over basal callosities and in apical half, punctures largest in intrahumeral sulcus and transverse depression. Body beneath and legs paler, shining, femora without tooth, claws toothed. Length, 2.3–2.5 mm; width, 1.2 mm.

TYPE.—Male, MCZ 27678, with one female paratype.

TYPE-LOCALITY.—Aguadores, Oriente Province, Cuba (6 June 1936; P. J. Darlington, Jr., collector).

REMARKS.—This species closely resembles *M. testaceum elachistum* Blake, also from Cuba, but it does not have such distinct punctation on pronotum or elytra, and the aedeagus is unlike that species.

Metachroma longicornis Blake

FIGURE 102

Metachroma longicorne Blake, 1966, pp. 216, 217.

DESCRIPTION.—About 3.0 mm in length, ovate, polished yellow-brown with deep reddish brown occiput, pronotum with a dark fascia, elytra with four small spots on each and with striate punctation only in transverse depression and near suture.

Head with interocular space half width of head, occiput deep reddish brown, polished, finely punctate, lower part of front paler brown, alutaceous and obsoletely punctate: Antennae slender, extending to middle

of elytra, pale yellow-brown. Prothorax approximately twice as wide as long with rounded sides and small tooth at apical and basal angles, surface lustrous, finely and not densely punctate, yellowish brown with deeper brown verging on piceous transverse markings. Scutellum yellowish brown. Elytra broader than prothorax with small humeri and a transverse depression below basal callosities in which striate punctures are visible, otherwise, except along suture, punctation is very indistinct; surface polished, yellow-brown with four small piceous spots on each elytron, one on the humerus, one below basal depression, another along side at middle, and a fourth near suture in apical half. Body beneath and legs yellowish brown. Length, 2.8 mm; width, 1.6 mm.

TYPE.—Female, MCZ 31195.

TYPE-LOCALITY.—Soledad, Cienfuegos, Cuba (22 November 1936; P. J. Darlington, Jr., collector).

REMARKS.—The pattern of the elytral spotting distinguishes this beetle from other small yellow-brown species.

Metachroma castaneum Blake

FIGURE 118

Metachroma castaneum Blake, 1965, pp. 5, 6.

DESCRIPTION.—Approximately 3.0 mm in length, oblong oval, shining, castaneous brown, with body beneath, legs and basal joints of antennae paler reddish brown; prothorax finely and not densely punctate, elytra with striate punctation visible along suture and in transverse depression below basal callosities.

Head with interocular space less than half width of head, eyes large, occiput and front smooth, shining, inconspicuously and finely punctate, deep brown with yellowish brown labrum. Antennae with four basal joints paler, remaining joints deep brown. Prothorax with rounded sides and acute tooth at basal angles, basal margin somewhat sinuate, disc not very convex, a little depressed behind eyes; surface finely punctate with punctures fading out on sides and near base, polished deep brown. Elytra not much wider than prothorax, with distinct basal callosities and, below, a transverse depression in which striate punctation is visible, punctures also along suture and in intrahumeral sulcus, otherwise nearly impunctate; surface polished, entirely dark reddish brown. Body beneath with sides of prosternum and metasternum, abdomen and legs paler reddish brown. Length, 2.7 mm; width, 1.3 mm.

TYPE.—Male, USNM 67556.

TYPE-LOCALITY.—Cayamas, Cuba (5 October; E. A. Schwarz, collector).

REMARKS.—Although of approximately the same size, this species differs from the description of Suffrian's two Cuban species, *M. laeviusculum* and *M. sordidum*, in being deep castaneous brown instead of yellow-brown.

Metachroma ensiforma Blake

FIGURE 124

Metachroma ensiforma Blake, 1947, p. 310.

DESCRIPTION.—Approximately 3.0 mm in length, oblong oval, shining pale yellow-brown with reddish brown markings on pronotum and elytra; pronotum finely and densely punctate except on sides, elytra with only vestiges of striate punctation in the shape of strong punctures below basal callosity and in intrahumeral sulcus. Aedeagus unusually long and slender.

Head with interocular space less than half its width, occiput and vertex with faint obsolete punctures tending to give a wrinkled appearance, a median depression on vertex, well-marked transverse groove separating front from clypeus, which is more distinctly and densely punctate with an emarginate anterior margin over labrum. Antennae pale with outer joints slightly deeper in color, extending below humeri. Prothorax not twice as broad as long, rather flat with arcuate sides and a small tooth at each angle, a transverse depression over head, surface densely punctate except about edges, yellowish brown with a deeper reddish brown median area. Elytra with deep intrahumeral sulcus and a depression below basal callosities, punctation indistinct except in these depressions, yellowish brown with two short reddish brown vittae on each elytron extending over basal callosity and a diagonal stripe from about the middle of the side down to suture, forming on the combined elytra a wide, open V; in poorly marked specimens only traces of these markings. Body beneath and legs yellow-brown, femora not toothed, claws with long basal tooth. Length, 2.7–3.1 mm; width, 1.4–1.6 mm.

TYPE.—Male, MCZ 27677. Four paratypes in MCZ; two paratypes in USNM.

TYPE-LOCALITY.—South side of Pico Turquino

(1,000–5,000 feet), Oriente Province, Cuba (June 1936; P. J. Darlington, Jr., collector).

REMARKS.—The long, sword-shaped (when viewed from above) aedeagus is unlike any that I have seen in this genus or related genera.

Metachroma odontotum, new species

FIGURE 109

DESCRIPTION.—About 4.5 mm in length, elongate oblong oval, shining, head and prothorax with deep reddish brown markings, elytra, abdomen, and legs paler yellowish brown, elytra with sutural edges and margins deep brown, anterior femora with large tooth.

Head with interocular space not quite half width of head, front with fine punctures and a median depressed line, yellow-brown with a dark plaga down from occiput, a faint trace of sulcus dividing front from clypeus, which is densely and coarsely punctate with anterior margin emarginate over labrum, jaws piceous. Antennae extending below humeri, dark brown. Prothorax about a third wider than long, with arcuate sides and tooth at each angle, not very convex, but flat, surface polished and very finely punctate, yellow-brown with deep reddish brown disc over middle and dark brown margins. Scutellum dark brown. Elytra almost three times as long as prothorax and wider, moderately convex with a short intrahumeral sulcus and depression below basal callosities, striate punctures regular, closely set, and distinct although fainter at apex, shining pale yellow-brown with sutural and marginal edges deeper reddish brown. Body beneath with prosternum deep reddish brown, abdomen paler yellow-brown, legs also pale, anterior femora with large conspicuous tooth, hind femora with smaller tooth. Length, 4.5 mm; width, 2.1 mm.

TYPE.—Male, USNM 70701.

TYPE-LOCALITY.—Cuba (taken on pineapple fruit, 12 May 1936, by Mirimanian).

REMARKS.—The only really distinctive feature about this beetle is the large tooth on the anterior femora. H. S. Barber has labeled the species as *M. suffriani* (Clav.) (*sutural*" Suffrian), but Suffrian's description of the color of the pronotum as with "leichten grünlichen Schimmer" does not apply to this beetle, nor does the size of about 3 mm (1½ lines). Since Suffrian's descriptions are conscientiously detailed, and he made no mention of the prominent tooth on the anterior femora, I do not think that this can be his species.

Doubtful Species

Suffrian described six species of *Metachroma* from Gundlach's collection of Chrysomelidae from Cuba, but I can recognize only one. Gundlach's specimens, in the Instituto de Segunda Ensenanza de la Habana, are kept in cases with a glass cover, and one is not allowed to examine them except through the glass cover. Suffrian's own collection is in the University of Halle in East Germany. Under the present political circumstances, the following Suffrian species will have to remain unknown to me: *Metachroma puncticollis, M. suturale, M. lituratum, M. laeviusculum, and M. sordidum.*

Key to Species from Hispaniola

1. Elytral striate punctures distinct to apex 2
   Elytral striate punctures not distinct to apex 5
2. Intervals between striae strongly costate 3
   Intervals between striae not strongly costate 4
3. Head with a dark spot on occiput, pronotum impunctate and with 2–4 dark spots, elytra with numerous small spots ..... ***M. darlingtoni*** Blake
   Head without dark markings, prothorax finely and densely punctate with darker areas often on each side, elytra without dark markings ..... ***M. barahonense*** Blake
4. Punctures on elytra widely spaced, elytra without depressions, femora toothed .. ***M. cinctipes*** Blake
   Punctures on elytra closely set and in basal half deeply impressed, elytra with slight transverse depression below basal umbones, femora not toothed ..... ***M. leonardi***, new species
5. Elytral striate punctures visible over basal umbones and to below middle but not extending to apex 6
   Elytral striate punctures not visible or much reduced over basal umbones and extending scarcely beyond middle of elytra, being most conspicuous in transverse depression 11

6. Pronotum with elongate punctures ..... *M. longipunctatum* Blake
   Pronotum either impunctate or with fine punctures 7
7. Pronotum impunctate, beetle piceous, sometimes with a greenish luster, about 3.0 mm long *M. hottense* Blake
   Pronotum with scattered punctures 8
8. Front femora with large tooth 9
   Front femora either not toothed or with small tooth 10
9. A deep transverse sulcus on front of head separating clypeus ..... *M. laevius* Blake
   No transverse sulcus on front of head separating clypeus ..... *M. dentatum* Blake
10. Femora with small tooth, deep reddish brown to piceous with metallic green luster; 4.0–4.5 mm long ..... *M. nigroviride* Blake
    Femora not toothed, yellowish or reddish brown, elytra with piceous spots; 2.5 mm long *M. obesum* Blake
11. Beetle mostly deep piceous black 12
    Beetle entirely pale yellow-brown or pale with dark spots 14
12. Piceous, with apex of elytra pale 13
    Apex of elytra not pale, elytra entirely dark ..... *M. melanochrotum*, new species
13. Legs reddish brown, with apex of femora and base of tibiae dark .. *M. leucurum* new species
    Legs with femora dark brown to piceous ..... *M. wolcotti* Bryant
14. Large (4.5 mm), with spots on elytra and dark apices to femora and tibiae *M. nigromaculatum* Blake
    Small (2.0–3.0 mm), entirely pale yellow-brown ..... *M. brevistriatum* Blake

Metachroma leonardi, new species

FIGURE 126

DESCRIPTION.—About 5.0 mm in length, broadly oblong oval, lustrous, prothorax deep reddish brown, nearly piceous, impunctate, elytra paler reddish brown with piceous circles about striate punctures and scattered dark spots in intervals at base, below humeri, and near middle; prothorax nearly as wide as elytra, antennae long, extending to middle of elytra.

Head with interocular space less than half width of head, eyes large, a distinct transverse sulcus separating front from clypeus and a short median depression on vertex; surface distinctly alutaceous, dull, very finely and sparsely punctate, clypeus short and broad, shallowly emarginate over pale yellow-brown labrum, jaws piceous, front piceous with a reddish brown spot on each side. Antennae unusually long and slender, pale, with the distal joints partially dark. Prothorax fully twice as wide as long, nearly as wide as elytra, with widely arcuate sides and very inconspicuous tooth at each angle, not very convex, with a slight depression over head, polished, almost impunctate, deep reddish brown piceous. Scutellum dark, impunctate, Elytra three times as long as prothorax, convex, with small humeri and very short shallow intrahumeral sulcus, scarcely a depression below, and regular, small but distinct punctures visible to apex and deeply impressed in basal half and on sides, each puncture ringed with piceous and intervals at base with some dark areas and also below humeri nearly to the middle dark and other shorter dark areas below middle. Body beneath with prosternum and breast reddish brown, abdomen paler, femora with dark ring at apex, base of tibiae tending to be darker. Femora not toothed, claws with long basal tooth. Length, 4.9 mm; width, 2.5 mm.

TYPE.—Male, USNM 70698.

TYPE LOCALITY.—St. Louis, Tortue Island, Haiti (April 1929; E. C. and G. M. Leonard, collectors).

REMARKS.—This species somewhat resembles *M. rosae* Bryant from Jamaica, but it is larger and has a darker head and prothorax and more deeply punctate elytra.

Metachroma laevius Blake

FIGURE 127

Metachroma laevius Blake, 1946, p. 22.

DESCRIPTION.—About 3.7 mm in length, broadly oblong oval, lustrous, head and prothorax reddish brown, antennae, elytra, legs, and undersurface yellowish brown; head and prothorax finely punctate, elytra with striate punctures indistinct in apical half. Anterior femora with large tooth.

Head with interocular space a little less than half its width, front nearly smooth with obsolete punctures, a deep sulcus dividing front from clypeus and a short median groove on vertex, clypeus alutaceous, finely punctate, with shallowly emarginate anterior margin

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over labrum. Antennae entirely pale yellow. Prothorax about a third wider than long with arcuate sides and a tooth at each angle, not very convex, lustrous reddish brown with vaguely darker areas on each side and fine, scattered punctures. Scutellum reddish brown. Elytra with fine, close-set, striate punctation, not deeply impressed and indistinct over basal callosities and apex; surface shiny, paler yellow-brown than prothorax. Body beneath shining, lightly pubescent. Anterior femora with large, sharply pointed tooth, posterior one with a small tooth. Length, 3.7 mm; width, 1.9 mm.

TYPE.—Male, MCZ 27350. Two paratypes, one of which is in USNM.

TYPE-LOCALITY.—Mt. Diego de Acampo, Dominican Republic, 3,000–4,000 feet (July 1938; P. J. Darlington, Jr., collector).

OTHER LOCALITY.—Puerto Plata, Dominican Republic, Donald Hurst.

REMARKS.—The most distinctive feature about this species is the large tooth on the anterior femora.

Metachroma longipunctatum Blake

FIGURE 128

Metachroma longipunctatum Blake, 1966, p. 217.

DESCRIPTION.—About 2.3 mm in length, oblong oval, shining, head and prothorax deep reddish brown, elytra, legs, and antennae paler yellowish brown, pronotum somewhat rugose with elongate punctures, elytra with transverse depression and basal callosities and clearly marked and rather coarse striate punctation.

Head with interocular space half width of head, a median depression on front, alutaceous, not at all shiny, deep reddish brown. Antennae extending below humeri, yellow-brown. Prothorax rather flat, nearly twice as wide as long, with widely arcuate sides and a tooth at basal angles, shiny deep reddish brown with distinctly elongate punctures, surface becoming somewhat rugose towards base. Scutellum reddish brown. Elytra shining yellowish brown, paler than prothorax, striate punctures distinct, larger in transverse depression below basal callosities, becoming fainter towards apex. Body beneath reddish brown, legs paler, femora not toothed. Length, 2.3 mm; width, 1.1 mm.

TYPE.—Male, MCZ 31196.

TYPE-LOCALITY.—La Visite and vicinity, LaSalle Range, 5,000–7,000 feet, Haiti (16–23 September 1934; P. J. Darlington, Jr., collector).

REMARKS.—This is one of the smaller species, and its conspicuously elongate punctures on the pronotum distinguish it from other small West Indian species.

Metachroma brevistriatum Blake

FIGURE 129

Metachroma brevistriatum Blake, 1946, p. 23.

DESCRIPTION.—Between 2–3 mm in length, oblong oval, shining yellow-brown, prothorax punctate in middle but smooth on sides, elytra sparsely striate punctate about scutellum and a little below basal callosities, apical half and sides nearly smooth.

Head with interocular space approximately half width of head, a transverse sulcus dividing clypeus and a faint linear depression on vertex, clypeus alutaceous, indistinctly punctate, front shining, with very inconspicuous shallow punctures. Antennae pale yellow-brown, sometimes outer joints with darkened tips. Prothorax approximately twice as wide as long with widely arcuate sides, not very convex and depressed over head, an acute tooth at each corner; surface distinctly and not very densely punctate, entirely pale yellow-brown. Scutellum pale. Elytra polished, usually with only traces of striate punctation in apical half, the only row reaching apex being one next to suture, others represented by a few short lines below and about basal callosities. Body beneath pale, shining, femora not toothed. Length, 2.3–3.0 mm; width, 1.3–1.8 mm.

TYPE.—Male, MCZ 27352. Six paratypes (3 male, 3 female) in MCZ; one paratype (male) in USNM.

TYPE-LOCALITY.—San Jose de Las Matas, Dominican Republic, 1,000–2,000 feet (June 1938; P. J. Darlington, Jr., collector).

OTHER LOCALITIES.—Dominican Republic: Constanza, 3,000–4,000 feet; Villa Altagracia, June 1938, P. J. Darlington, Jr.; six km. west of Ciudad Trujillo, 22 December 1955; Jarabacoa, 1950, N. L. H. Krauss.

REMARKS.—This species is very close to the Cuban species *M. simile* Blake, but it has a differently shaped aedeagus. Unlike the Cuban species, there are no dark markings on any of the specimens examined.

Metachroma cinctipes Blake

FIGURE 130

Metachroma cinctipes Blake, 1946, pp. 26, 27.

DESCRIPTION.—Between 4.7 and 5.6 mm in length, broadly oblong oval, shining, head, prothorax, and most of undersurface more or less yellowish or reddish brown with deeper reddish brown or piceous areas, elytra and legs paler yellowish brown, elytra with small spots about base and below middle, both femora and tibiae with dark bands; prothorax at base nearly as wide as elytra, polished, elytra with striate punctures widely spaced.

Head with interocular space less than half width of head, eyes large; a broad piceous plaga extending down front, a transverse groove separating clypeus, which is deeper brown and alutaceous with distinct but not dense punctation, anterior margin over labrum barely emarginate. Antennae extending below humeri, outer joints thicker and darker. Prothorax not quite twice as wide as long at base, much broader at base than anteriorly, with rounded sides and little trace of tooth at anterior angle but one at basal angle; surface polished, nearly impunctate, reddish brown with a large darker area on each side. Elytra convex without depressions, not much wider than prothorax with small humeri and short intrahumeral depression and very little trace of a transverse depression below, basal callosities not well marked, surface shiny, striate punctures widely spaced and distinct; pale yellow-brown with remnants of spots about base, a large spot on each elytron below the middle near the suture, and a smaller one near lateral margin. Body beneath tending to be reddish brown or piceous, especially on breast, legs with dark bands both on femora and base of tibia, tarsal joints often dark, all femora with trace of a tooth, most pronounced on hind femora, claws with long tooth. Length, 4.7–5.6 mm; width, 2.8–3.1 mm.

TYPE.—Female, MCZ 27357.

TYPE-LOCALITY.—Mt. Diego de Acampo, Dominican Republic, 3,000–4,000 feet (July 1938; P. J. Darlington Jr., collector).

OTHER LOCALITIES.—*Dominican Republic:* Villa Altagracia, July 1938, P. J. Darlington; San Jose de las Matas, 1,000–2,000 feet, June 1938, P. J. Darlington; Puerto Plata, Donald Hurst. *Haiti:* Mount Basil, 4,700 feet, 9 September 1934, P. J. Darlington, Jr.; Furcy, W. M. Mann; Plaisance, feeding on fruit of rose apple, October 1965, Kiskuk and Cooley.

REMARKS.—The large prothorax and general shape of this beetle remind one of *M. rosae* Bryant, of Jamaica. One feature that is rather unusual, and unlike *M. rosae,* is the widely separated striate punctures on the elytra that are distinct to the apex.

Metachroma obesum Blake

FIGURE 131

Metachroma obesum Blake, 1946, pp. 23, 24.

DESCRIPTION.—About 2.5 mm in length, ovate, shining, head, prothorax, legs and undersurface reddish brown, antennae with seven distal joints dark at base, elytra yellowish brown with piceous spots, prothorax distinctly punctate, elytra with striate punctures disappearing after the middle.

Head with interocular space more than half width of head, coarsely punctate throughout, a transverse sulcus dividing clypeus from front and a short deep cleft on vertex; a dark occipital spot running down to vertex. Antennae extending below humeri, four basal joints pale, remainder dark at base. Prothorax more than a third wider than long with well-rounded sides and a tooth at each angle; surface alutaceous and distinctly but not densely punctate, smooth near margin; deep reddish brown with an irregular darker median fascia. Scutellum reddish brown. Elytra shining pale yellow-brown with piceous spots, one on humerus, three below it in a transverse row, four other small spots on each elytron forming an interrupted fascia across elytra below the middle. Striate punctation distinct to middle of elytra but vanishing in apical half and on sides shortly below the humeri. Body beneath shining reddish brown, nearly glabrous, claws toothed, but femora without toothing. Length, 2.5 mm; width, 1.5 mm.

TYPE.—Female, MCZ 27353.

TYPE-LOCALITY.—Constanza, 3,000–4,000 feet, Dominican Republic (August 1938, P. J. Darlington, Jr., collector).

REMARKS.—This is an unusually broadly ovate species with conspicuous dark elytral spots and the apical half entirely smooth. It differs from *M. brevistriatum* Blake in having a narrower prothorax and dark markings on head and elytra.

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Metachroma nigromaculatum Blake

FIGURE 132

Metachroma nigromaculatum Blake, 1962, p. 175.

DESCRIPTION.—About 4.5 mm in length, oblong oval, shining, prothorax impunctate, elytra with striate punctures distinct only in basal half and not over basal callosities, deep reddish brown with vague darker areas on pronotum and at base of elytra, and a large dark area in middle in apical half, legs pale with dark-banded femora and tibiae.

Head with interocular space approximately half width of head, alutaceous, clypeus separated from front by a deep transverse groove, a short median depression on vertex, reddish brown with a darker area in middle of front. Antennae slender, extending well below humeri, reddish brown with deeper brown outer joints. Prothorax not very convex, with arcuate sides and small tooth at each angle, depressed slightly over head, polished, impunctate, deep reddish brown with indefinite dark areas on each side. Scutellum reddish brown. Elytra nearly three times as long as prothorax, with slight basal callosities and faint transverse depression below, impunctate over callosities and with short rows of punctures below, smooth in apical half and on sides, deep reddish brown with a short vittate piceous mark in middle of base, a smaller spot below humerus, and on each elytron a large rounded dark area in apical half, almost connected at suture but not reaching apex. Body beneath reddish brown, legs yellowish brown, femora with dark ring near apex, tibiae dark at apex. Femora not toothed; claws with short basal tooth. Length, 4.5 mm; width, 2.3 mm.

TYPE.—Male, USNM 65894.

TYPE-LOCALITY.—Kinscoff, Haiti (2 August 1935; R. E. Blackwelder, collector).

REMARKS.—The absence of striate punctation in the apical half of the elytra and the large dark spot in the apical half of each elytron are distinguishing characters of this species.

Metachroma darlingtoni Blake

FIGURE 133

Metachroma darlingtoni Blake, 1946, p. 24.

DESCRIPTION.—From 4.0 to 5.0 mm in length, elongate oblong oval, shining, pale yellow-brown with a dark streak down occiput to middle of front, four (or two coalescing) dark spots across pronotum and small irregular spots across base and below middle of elytra; legs banded, undersurface more or less dark, elytral striae deeply impressed.

Head with interocular space less than half width of head, eyes large, occiput with a piceous streak down front, shining, lightly punctate, a well-marked transverse sulcus dividing front from clypeus and a short median line on vertex, clypeus more distinctly punctate and somewhat alutaceous, anterior margin very shallowly emarginate over labrum, jaws dark. Antennae extending below humeri, apical joints dark. Prothorax not quite twice as broad as long with arcuate sides and tooth at anterior and basal angles, only slightly convex, shining, smooth, impunctate, with either two or four piceous spots across middle. Scutellum reddish brown. Elytra shining pale yellow-brown, with four spots across the base and six irregularly shaped spots below the middle, striate punctures closely set and impressed and distinct to apex, intervals somewhat costate, especially on sides where there is a strong costa from humerus along side, humeri prominent, with a transverse depression below. Body beneath varying in coloring, in two of the three specimens dark piceous, one specimen with the abdomen pale. Legs pale, both femora and tibiae with a dark band, claws with long tooth, femora not toothed. Length, 4.2–5.2 mm; width, 2.0–2.6 mm.

TYPE.—Female, MCZ 27354. One paratype in USNM.

TYPE-LOCALITY.—Constanza to Jarabacoa, Dominican Republic, 2,000–4,000 feet (August 1938; P. J. Darlington, Jr., collector).

OTHER LOCALITY.—Villa Altagracia, Dominican Republic, July 1938, P. J. Darlington, Jr.

REMARKS.—Deeply impressed striae, spotted legs, and large eyes are the characteristics of this species.

Metachroma nigroviride Blake

FIGURE 134

Metachroma nigroviride Blake, 1948, pp. 274–279.

DESCRIPTION.—Between 4.0 and 5.0 mm in length, broadly oblong oval, shining, deep reddish brown, piceous or with a dark green metallic luster, antennae reddish brown, legs varying as upper surface; prothorax nearly as broad as elytra, very finely and sparsely punc-

tate, elytral striate punctures becoming very fine over basal callosities, on sides, and at apex.

Head with interocular space half its width, polished, with fine punctures and a faint median line down front, no transverse sulcus separating clypeus, which is more distinctly punctate, and with a wide emargination anteriorly over labrum. Antennae extending nearly to middle of elytra, apical joints tending to be darker. Prothorax not quite twice as wide as long, but nearly as wide as elytra, with arcuate sides and a small tooth at apical and basal angles, surface polished, finely and sparsely punctate. Scutellum polished. Elytra with a slight basal callosity, well-marked humeri, and a short intrahumeral depression and slight transverse depression below basal callosity, rows of striate punctures distinct but not coarse, becoming fine over basal callosities, on sides, and at apex. Body beneath deep reddish brown to piceous, shiny, lightly pubescent, femora with small tooth, claws with long tooth. Length 4.0–4.5 mm; width 2.5–2.6 mm.

TYPE.—Male, in MCZ. Six paratypes in MCZ; one paratype in USNM.

TYPE-LOCALITY.—Puerta Plata, Dominican Republic (Hurst, collector).

OTHER LOCALITIES.—*Dominican Republic:* Villa Altagracia, July 1938, P. J. Darlington, Jr.; Constanza, 3,000–4,000 feet, August 1938, P. J. Darlington; Pico de Isabel de Torres, near Puerta Plata, 10 May 1959, M. W. Sanderson.

REMARKS.—Three of the ten specimens examined are deep reddish brown, one is piceous, and the rest are more or less deep metallic green. This green coloring is unusual in the genus, which is composed of species varying from yellow-brown to piceous.

Metachroma dentatum Blake

FIGURE 135

Metachroma dentatum Blake, 1965, p. 5.

DESCRIPTION.—About 3.5 mm in length, broadly oblong oval, shining yellowish brown, with the prothorax having deeper reddish brown areas, prothorax finely punctate, flat, elytra pale yellow-brown, all femora toothed, eyes large.

Head with interocular space less than half width of head, eyes large, a median depression on vertex, no transverse sulcus dividing clypeus, occiput and front finely punctate, entirely pale yellow. Antennae extending below humeri, entirely pale. Prothorax about twice as wide as long, rather flat, depressed over head, sides widely arcuate, a tooth at each angle, lower margin not at all sinuate but straight; surface very shiny, with fine punctures in middle; yellow-brown with reddish brown areas in middle. Scutellum pale. Elytra smooth with a transverse depression below small basal callosities, not very convex, striate punctures apparent in basal half but fading below middle; entirely pale yellow. Body beneath pale, all femora toothed, front femora with an unusually large tooth. Length, 3.6 mm; width, 2.0 mm.

TYPE.—Female, in AMNH.

TYPE-LOCALITY.—Santo Domingo, Dominican Republic (3 March 1955; A. M. Nadler, collector).

REMARKS.—This is a broadly oblong oval beetle whose most distinctive features are the wide, flat prothorax and the conspicuous tooth on the front femora.

Metachroma wolcotti Bryant

FIGURE 136

Metachroma wolcotti Bryant, 1926, p. 403.

DESCRIPTION.—Between 4.0 and 5.0 mm in length, oblong oval, lustrous piceous black, prothorax rather flat, finely punctate, elytra with striate punctures most evident in transverse depression below basal callosities, fading away after middle.

Head with interocular space less than half width of head, more or less coarsely punctate, especially on clypeus, no transverse sulcus separating front from clypeus or frontal depression, entirely piceous except reddish brown mouthparts. Antennae yellowish brown with deeper distal joints, extending to below humeri. Prothorax nearly as broad as elytra with widely curved sides and small tooth at each angle, not very convex, lustrous black with fine inconspicuous punctation. Scutellum dark. Elytra shining piceous with a slight basal umbone and transverse depression below in which striate punctures are large, but otherwise, except along suture and in intrahumeral sulcus, punctation nearly obsolete. Body beneath deep brown verging on being piceous on prosternum and femora, tip of abdomen paler, all tibiae and tarsi brownish, femora toothed, claws with basal tooth. Length, 4.4–5.0 mm; width 2.2–3.0 mm.

TYPE.—In BMNH. Two "cotypes" in USNM.

TYPE LOCALITY.—Port-au-Prince, Haiti (taken at light June 1925 by G. N. Wolcott).

REMARKS.—This species is very close to a Cuban species, *M. zayasi* Blake, described from Oriente Province, which is nearest to Haiti. There are, however, slight differences in shape and punctation: *M. zayasi* has more striate punctures on the elytra and fewer on the prothorax. Also *M. wolcotti* Bryant is more uniformly darker in color and a more robust beetle. Bryant describes the prothorax as being black with a "metallic tinge" and the apex as "slightly fuscous." In the two cotypes in the USNM collection I can see no metallic tinge and the apex of the elytra is not paler.

Metachroma hottense Blake

FIGURE 137

Metachroma hottense Blake, 1948, p. 279.

DESCRIPTION.—About 3.0 mm in length, broadly oblong oval, polished dark metallic green with dark brown mouthparts, antennae, legs, and undersurface; head and pronotum impunctate, striate punctures on elytra coarsest below basal callosities, on sides and at apex becoming indistinct.

Head with interocular space more than half its width, front broad, flat, impunctate, no transverse groove separating front from clypeus, labrum reddish brown. Antennae extending below humeri, five basal joints reddish brown, apical joints piceous. Prothorax not quite twice as broad as long, moderately convex with strongly arcuate sides and small tooth at each angle, surface polished, impunctate, basal margin lightly sinuate. Scutellum dark. Elytra a little broader than prothorax with short intrahumeral sulcus and a transverse depression below basal callosities; striate punctures in depression coarser than elsewhere, at sides and apex becoming rather indistinct; surface polished metallic green. Body beneath dark, shining, lightly pubescent, femora not toothed. Length 3.2 mm; width, 2.0 mm.

TYPE.—Male, MCZ 27826.

TYPE-LOCALITY.—Desbarriere, Morne LaHotte, Haiti, at about 4,000 feet (12–14 October 1934; P. J. Darlington, Jr., collector).

REMARKS.—This beetle is considerably smaller than *M. nigroviride* Blake, which sometimes also has a green metallic lustre, and the thorax differs in not being punctate at all.

Metachroma leucurum, new species

FIGURE 138

DESCRIPTION.—Between 3.5 and 4.0 mm in length, oblong oval, lustrous black with apex of elytra pale, and legs with apex of femora and base of tibiae dark; pronotum impunctate, elytral striation disappearing after middle.

Head with interocular space less than half width of head, shining piceous above, occasionally with paler brown spot on either side of front, punctures sparse, a more or less well marked transverse sulcus separating front from clypeus, which is more alutaceous and finely punctate. Antennae extending below humeri, slender, distal joints darker. Prothorax nearly twice as wide as long with arcuate sides and small tooth at each angle, surface lustrous black, nearly impunctate. Elytra not quite three times as long as prothorax, striate punctation faint over basal umbones and disappearing before middle; a slight transverse depression below umbones; piceous black except the wide pale apex and often pale along side from humerus down, leaving a submarginal pale area, this latter variable. Body beneath more or less dark brown to piceous, legs reddish brown with apex of femora and base of tibiae dark, claws dark. Femora toothed, claws with long tooth. Length, 3.4–4.1 mm; width, 1.8–2.0 mm.

TYPE.—Male, in BMNH. Two paratypes in BMNH; one paratype in USNM.

TYPE-LOCALITY.—Port-au-Prince, Haiti (1–10 May 1908; Dr. M. Cameron, collector).

REMARKS.—The coloration of this species is similar to that of *M. adustum* Suffrian from Cuba and southern Florida, but it is a smaller beetle with a wider prothorax and not so strongly punctate elytra. A single larger specimen from Chester Vale, Haiti, collected 16 June 1908, by Dr. Cameron differs from the typical specimens in size (measuring 5.0 mm in length and 3.0 mm in width) as well as coloration of the elytra, having only the rim about the apex pale. It is a female, and I am not able to determine whether it represents a different species. The elytral punctation appears a little more distinct.

Metachroma melanochrotum, new species

FIGURE 139

DESCRIPTION.—About 5.5 mm in length, elongate oblong oval, shining black, prothorax minutely punc-

tate, elytra with short rows of striate punctures in transverse depression below basal umbones.

Head with interocular space less than half width of head, eyes large, front densely and finely punctate, without trace of transverse sulcus or median depression, clypeus shallowly emarginate over labrum, with deep reddish brown mouthparts. Antennae slender, extending below humeri, reddish brown. Prothorax large, almost as wide as elytra, only moderately convex, with rounded sides and small tooth at each angle, surface lustrous black, very finely punctate. Scutellum black. Elytra not three times as long as prothorax, lustrous black with striate punctation only in short rows in transverse depression below basal callosities and along suture and in intrahumeral sulcus, short rows along sides, punctures impressed, producing a slight costate effect in their short range. Body beneath dark, legs deep reddish brown, femora toothed, claws with long basal tooth. Length, 5.5 mm; width, 2.5 mm.

TYPE.—Male, in BMNH. One paratype in USNM.

TYPE-LOCALITY.—Carrefour, Haiti (May 1908; Dr. M. Cameron, collector).

REMARKS.—This is another of the black species prevalent in the West Indies. In its sparse elytral punctation is resembles *M. felis* Blake from Cat Island, but the legs are darker and the prothorax is larger. It is also closely related to *M. zayasi* Blake from Cuba, but differs from that species in having a larger prothorax and even less-punctate elytra. It is larger than *M. wolcotti* Bryant, having a wider prothorax and more deeply impressed elytral punctures.

Metachroma barahonense Blake

FIGURE 140

Metachroma barahonense Blake, 1946, p. 23.

DESCRIPTION.—Between 4.2 and 4.7 mm in length, elongate oblong oval, shining, head, prothorax, and undersurface deeper yellow-brown or reddish brown than the pale yellow-brown elytra, legs, and antennae; prothorax rather flat with prominent tooth at each angle, closely punctate, elytra with close-set, impressed striate punctures distinct to apex.

Head with interocular space less than half width of head, eyes large, front and occiput indistinctly punctate and shining, a transverse groove separating front from clypeus, a median depressed line on vertex, clypeus densely and coarsely punctate and anteriorly nearly straight over labrum. Antennae extending below humeri, pale yellow-brown, often with darker outer joints. Prothorax approximately a third wider than long with well-rounded sides and conspicuous tooth at each angle, rather flat and not convex, surface lustrous reddish brown, finely and densely punctate with sides, along anterior margin and along base, smooth and not so deep a brown as the punctate area. Scutellum reddish brown. Elytra almost three times as long as prothorax with regular close-set and impressed punctures that on sides have costate intervals, a more-pronounced costa from humerus along side, punctation distinct to apex; a distinct intrahumeral depression and prominent humeri, also a transverse depression below, pale yellow-brown. Body beneath reddish brown with pale legs, a faint deepening of color about apex of femora and base of tibiae, claws with long tooth, no tooth on femora. Length, 4.2–4.7 mm; width, 2.2–2.3 mm.

TYPE.—Female, MCZ 27359. One female paratype in MCZ; one female paratype in USNM.

TYPE-LOCALITY.—Barahona, Dominican Republic (September 1938; P. J. Darlington, Jr., collector).

OTHER LOCALITIES.—*"Santo Domingo"* (female specimen in Frey Museum). *Haiti:* Carrefour, several specimens in BMNH, 1–3 May 1908, M. Cameron.

REMARKS.—The short, wide, flattened prothorax and the elytra with strong, dense, striate punctation and somewhat costate intervals on the sides distinguish this species.

Key to Species from Puerto Rico

1. Elytral striate punctures visible to apex, a lateral costa in female, piceous black ***M. oakleyi***, new species
   Elytral striate punctures not visible to apex, no lateral costa in female, yellowish or reddish brown, with or without dark markings 2
2. Head with interocular space half width of head 3
   Head with interocular space less than half width of head 6

3. Head with well-marked transverse groove separating front from clypeus 4
   Head without well-marked transverse groove separating front from clypeus
   M. leiotrachelus, new species
4. Femora conspicuously hairy at apex ..... **M. tricharthrum** Blake
   Femora not conspicuously hairy at apex 5
5. Striate punctures on elytra not visible much below transverse depression, pronotum with vittate marking on each side ..... ***M. fenestratum*** Blake
   Striate punctures visible to middle, becoming gradually fainter after middle, pronotum without
6. Aedeagus ending in a long, gradually narrowed, pointed tip ..... ***M. antennale*** Weise
   vittate markings ..... ***M. nanum*** Blake
   Aedeagus with a broad apex having a short pointed tip 7
7. Elytra more than three times as long as prothorax ..... ***M. metrium*** Blake
   Elytra not three times as long as prothorax ..... ***M. amplicollis*** Blake

Metachroma antennale Weise(?)

FIGURES 151, 152

Metachroma antennalis Weise, 1885, p. 155.

DESCRIPTION.—From 2.5 to 3.2 mm in length, oblong oval, shining yellow-brown with slightly deeper colored head and prothorax, varying from being without markings to having an elongate spot on each side of pronotum and reddish brown to piceous markings on elytra.

Head with interocular space a little less than half width of head, a deep sulcus dividing front from clypeus, anterior margin of clypeus nearly straight over labrum, surface shining, nearly impunctate, yellow-brown, sometimes with vague darkening on occiput, jaws piceous. Antennae yellow-brown, extending below humeri. Prothorax not twice as broad as long, depressed over head, moderately convex with rounded sides; surface deep orange-brown, in darker specimens with elongate spot on each side, mirror-smooth, impunctate. Scutellum reddish brown. Elytra approximately three times as long as prothorax and wider, convex, with intrahumeral sulcus and well-marked transverse depression below basal callosities, striate punctation indistinct over basal callosities and on sides, not extending much below middle, apical half impunctate; ranging in color from being entirely pale yellow-brown to having a reddish brown spot in middle at base of each elytron and reddish brown fascia in transverse depression, and in darker specimens a piceous area covering elytra except humerus and below, and a wide pale apical area. Body beneath reddish brown with paler abdomen and legs, femora not toothed, claws with basal tooth. Length, 2.5–3.2 mm; width, 1.3–1.6 mm.

TYPE.—Whereabouts unknown.

TYPE-LOCALITY.—Puerto Rico.

OTHER LOCALITIES.—*Puerto Rico:* Rio Piedras, on guava; Bayamon, on guava; Aibonito, on guava.

REMARKS.—It is with considerable hesitation that I am determining this species as Weise's *M. antennale*. As in the case of some of the small Cuban species that Suffrian described, there are in Puerto Rico several small species that are difficult enough to distinguish when one has the specimens. From written descriptions such as those of Suffrian and Weise, one can only guess. All of these little species have many color variations, and only by dissecting for the aedeagus can one separate them satisfactorily. In this species the specimens vary from being entirely pale to having two dark spots on the pronotum and the elytra with a large piceous area in the basal half. There are three other small species with similar markings. One, which I described as *M. nanum* (unfortunately a female, without any markings at all), I can separate only by the fact that the eyes are more widely separated. In a second, *M. fenestratum* Blake, also with similar markings, the elytral dark area extends farther down towards the apex, the striate punctures do not extend to middle of the elytra, and the aedeagus has a longer and thinner tip. A third species, *M. tricharthrum* Blake, I so named because of the conspicuously hairy femora. In this species the aedeagus is wider.

Metachroma fenestratum Blake

FIGURE 155

Metachroma fenestratum Blake, 1947, p. 312.

DESCRIPTION.—About 3.0 mm in length, oblong oval, lustrous yellowish or reddish brown with a dark vitta on each side of pronotum and a broad dark marking on the basal callosity of elytron and below along the suture, and a fainter band running from about the middle of the side diagonally across to the suture;

head and pronotum indistinctly punctate, elytra with large striate punctures for a short distance below basal callosities and in intrahumeral sulci.

Head smooth, with interocular space about half its width, in some specimens indistinct wrinkles as of obsolete punctures, transverse groove separating clypeus deep. Antennae extending to the middle of the elytra, five distal joints with dark apex. Prothorax rather narrow, considerably less than twice as broad as long, with curved sides and a sharp tooth at each corner; surface very shiny, only indistinctly and sparsely punctate; deep reddish brown with a dark stripe on either side. Elytra more than three times as long as prothorax, with small humeri and basal callosities and a deep intrahumeral sulcus; a line of indented punctures along base and down suture, and short rows of large punctures below the basal callosities and in intrahumeral grooves, these rows becoming indistinct before the middle; surface very smooth and shiny, pale yellowish brown with dark markings in the middle of the base and below for a short distance along the suture, a darker band starting from the side at middle and extending diagonally across to the suture, but becoming paler. Body beneath shining yellowish or reddish brown. Femora not toothed; claws with long basal tooth. Length, 2.8–3.2 mm; width, 1.7 mm.

TYPE.—Male, MCZ 27661. One paratype in MCZ; one paratype in USNM.

TYPE-LOCALITY.—Yauco, Puerto Rico (15 June 1934, C. M. Matos, Stuart T. Danforth collection, on *Eugenia* species, 13 May 1934, R. G. Oakley).

REMARKS.—The vittate markings on the pronotum of this species distinguish it easily. Also, the shape of the aedeagus is rather peculiar in this genus.

Metachroma tricharthrum Blake

FIGURE 154

Metachroma tricharthrum Blake, 1946, pp. 26, 27.

DESCRIPTION.—About 2.0 mm in length, oblong oval, lustrous pale yellow-brown with a piceous mark on occiput, one on each side of pronotum, and a median dark spot at base of each elytron and another transverse one at middle not quite reaching suture; sides of prosternum and metasternum dark; elytral striate punctation absent in apical half.

Head with transverse groove separating clypeus from front, no median depression on front; polished, impunctate with a piceous area on occiput. Antennae extending to middle of elytra, six distal joints dark. Prothorax a third wider than long with arcuate sides and small tooth at angles; surface polished and finely and not densely punctate, pale yellow-brown with dark margin and a piceous area on each side. Elytra considerably wider than prothorax, polished pale yellow-brown, a dark piceous spot in middle at base and another transverse one across below middle not reaching suture, margins dark; only sutural striate punctures entire the length of elytra, others disappearing at sides, over basal callosities, and in apical half. Body beneath with sides of prosternum and metasternum dark, abdomen and legs pale; femora conspicuously hairy at apex, not toothed. Length, 2.2 mm; width, 1.2 mm.

TYPE.—Male, MCZ 27356.

TYPE-LOCALITY.—Maricao Forest (2,000–3,000 feet), Puerto Rico (30 May–2 June 1938, P. J. Darlington, Jr.; collector).

REMARKS.—The conspicuous bristles at the apex of the femora have suggested the name *tricharthrum* for this species.

Metachroma nanum Blake

FIGURE 150

Metachroma nanum Blake, 1958, p. 96.

DESCRIPTION.—About 3.0 mm in length, oblong oval, shining, elytra distinctly striate punctate, yellow-brown without dark markings except brownish mouthparts.

Head with interocular space half its width, lightly but densely punctate over occiput, a transverse groove between antennal sockets dividing front from clypeus, anterior margin of clypeus with small emargination, jaws large and deeper brown. Antennae not extending to middle of elytra, entirely pale. Prothorax moderately convex with arcuate sides, surface shining, very indistinctly punctate, pale. Elytra a little more than three times as long as prothorax, with striate punctures coarse in intrahumeral sulcus and in depression below basal callosities, gradually becoming finer and vanishing at apex; surface very shiny, entirely pale yellowish brown. Body beneath and legs pale, femora not toothed, claws with long tooth. Length, 3.0 mm; width, 1.6 mm.

TYPE.—Female, USNM 64534.

TYPE-LOCALITY.—Puerto Rico (collected on guava by Kline, 31 May 1951).

REMARKS.—This species is approximately the same size as the Cuban species *Metachroma simile* Blake, but it is more distinctly punctate on the elytra. Possibly other specimens, as in the case of *M. simile,* have dark markings. The interocular space is wider than in *M. antennale* Weise, and the striate punctures extend farther down towards the apex than is usually the case in that species.

Metachroma metrium Blake

FIGURE 147

Metachroma metrium Blake, 1947, p. 311.

DESCRIPTION.—About 4.0 mm in length, broadly oblong oval, shining yellowish brown with dark markings on the occiput, thorax, and elytra; on each elytron a spot on the basal callosity, three spots placed transversely below the basal callosity and two or three paler ones slightly below the middle, one on the edge and the other on the side; punctation on elytra indistinct in apical half.

Head with interocular space not half width of head, eyes large; occiput and front obsoletely punctate and somewhat wrinkled, with a broad dark band extending down front and a slight depression between eyes. Antennae extending to middle of elytra, six distal joints deeper in color. Prothorax not quite twice as wide as long, not at all convex but flat, sides arcuate and a small tooth at each angle; surface mirror-smooth, impunctate, yellow-brown with dark brown or piceous irregular markings on each side. Elytra more than three times as long as prothorax, with small humeral prominences, a short intrahumeral sulcus and not-pronounced basal callosities with a transverse depression below; striate punctation rather fine except in transverse depression, indistinct in apical half; shining yellow-brown with a dark streak in middle of base, three small spots across below this, the outer one on the edge, and two or three larger, less-distinct spots slightly below the middle. Body beneath and legs pale, femora with a dark spot at apical narrowing and dark along sides of tibiae. No tooth on femora, a short basal tooth on claws. Length, 4.1–4.3 mm; width, 2.2–2.4 mm.

TYPE.—Male, MCZ 27679. One paratype in MCZ; one paratype in USNM.

TYPE-LOCALITY.—Villalba, Puerto Rico (21–28 June 1934; C. M. Matos, collector).

OTHER LOCALITY.—Ponce, Puerto Rico, R. G. Oakley.

REMARKS.—In shape and markings this species somewhat resembles *M. cinctipes* Blake from the Dominican Republic, but that species has a larger prothorax and the elytral punctation is more distinct.

Metachroma amplicollis Blake

FIGURE 153

Metachroma amplicollis Blake, 1947, pp. 312, 314.

DESCRIPTION.—About 3.0 mm in length, oblong, shining yellow or reddish brown with a dark spot on the occiput, a broad, irregular band across pronotum, and on elytra a small spot at base of basal callosity and below in the depression and near the margin a spot, and in some specimens two spots in middle; pronotum almost impunctate; elytra with striate punctation entire in only two rows next to suture. Thorax almost as broad as elytra.

Head with interocular space less than half its width; eyes large, occiput and front distinctly but finely punctate, more coarsely so on clypeus, a median sulcus dividing clypeus from front, a slight depression on front; yellow-brown with a broad dark plaga down front. Antennae extending to middle of elytra, pale. Prothorax large, nearly twice as broad as long and approximately as wide as elytra, sides widely curved and a sharp tooth at each angle; surface smooth, often impunctate, although in some specimens a fine punctation; reddish brown with a large transverse dark band, in paler specimens this broken into two large spots. Elytra with small humeri and short intrahumeral sulcus, a slight depression below basal callosities; punctation fine and only the two rows next to suture entire, the other rows becoming indistinct toward apex; yellowish or reddish brown with piceous spots about basal callosity and in darker specimens near middle. Body beneath and legs pale, in darker specimens apex of femora dark-ringed; no toothing of femora, claws with tooth. Length, 2.7–3.4 mm; width, 1.4–1.6 mm.

TYPE.—Male, MCZ 27682. Three paratypes in MCZ; one paratype in USNM.

TYPE-LOCALITY.—Guanica, Puerto Rico (25 June 1934; C. M. Matos, collector).

REMARKS.—In its unusually large prothorax this species resembles *M. cinctipes* Blake from the Dominican Republic, but it is a considerably smaller species with less-distinct punctation.

Metachroma leiotrachelus, new species

FIGURE 148

DESCRIPTION.—Approximately 3.5 mm in length, oblong oval, shining, head and prothorax deep reddish brown, almost piceous, elytra yellowish brown, legs with apex of femora and sometimes base of tibiae piceous, pronotum lustrous, impunctate, elytra with regular striate punctures becoming indistinct towards apex.

Head with interocular space half width of head, a faint transverse line separating front from clypeus, clypeus distinctly punctate, anterior margin only slightly emarginate over pale yellow-brown labrum, jaws piceous, front faintly punctate, a short median linear depression on vertex, polished reddish brown. Antennae slender, pale, extending below humeri. Prothorax moderately convex, with well-rounded sides and small tooth at each angle, a little more than a third wider than long, nearly impunctate, lustrous deep reddish brown. Scutellum reddish brown. Elytra slightly wider than prothorax and more than twice as long, convex, with short intrahumeral sulcus and a slight transverse depression below basal callosities, regular striate punctures becoming smaller after the middle and fading away on sides and apex, surface lustrous dark yellow-brown. Body beneath reddish brown, legs paler yellow-brown, with dark-ringed apex of femora and often base of tibiae dark, femora not toothed, claws with long basal tooth. Length, 3.4–3.7 mm; width, 1.9–2.0 mm.

TYPE.—Male, in MCZ. Three paratypes in MCZ; two paratypes in USNM.

TYPE-LOCALITY.—Coamo Springs, Puerto Rico (Stuart Danforth collection, 10 May 1919, 28 September 1929).

OTHER LOCALITY.—*St. Thomas:* 20 October 1908, Peetz. *Puerto Rico:* Pico Atalya, near Anasco, 3 July 1958, M. W. Sanderson; Ponce, on leaves of *Scirpus validus,* 29 September 1933, R. G. Oakley; Matrullus, on *Micropholis curvata,* 15 October 1934, R. G. Oakley; Quebradillas, on cotton, June–July 1922, G. N. Wolcott.

REMARKS.—This is another of the broad reddish brown species allied to *M. ustum* LeConte, having a lustrous and nearly impunctate pronotum and elytra with the striate punctation fading at apex. The aedeagi of these species are all much alike, this one differing only slightly in the tip. This species, however, is much smaller than *M. ustum. Metachroma laevius* Blake from the Dominican Republic has toothed femora and less distinctly punctate elytra.

Metachroma oakleyi, new species

FIGURE 149

DESCRIPTION.—Approximately 4.5 mm, in length, oblong oval, lustrous piceous black with pale yellow-brown antennae, tarsal joints, and tip of abdomen; prothorax almost as wide as elytra, shining, smooth with very fine punctures; elytra with deeply impressed striate punctation becoming finer at apex, and in female with a lateral costate fold most pronounced in apical half.

Head with interocular space half width of head, occiput and front densely but obsoletely punctate, producing a somewhat wrinkled surface, only slightly shiny, a faint transverse sulcus dividing front from clypeus which is alutaceous and more deeply punctate, anteriorly emarginate over labrum, palpi pale yellow, rest of head piceous. Antennae extending below humeri, pale yellow-brown. Prothorax nearly twice as wide as long, about as wide as elytra, with widely rounded sides, rather flat, a small tooth at each angle, surface lustrous black and very finely punctate. Scutellum black. Elytra three times as long as prothorax, broad and convex with (in female) a compressed lateral fold in apical half hiding margin beneath from middle to apex, in the basal half from humerus to middle this is not so marked; striate punctation deeply impressed and in transverse depression below basal callosities rather coarse, distinct to apex but finer and shallower there. Body beneath shining piceous black except at tip of abdomen which is pale yellow-brown, legs dark except yellowish brown tarsi, femora minutely toothed. Length, 4.4 mm; width, 2.0 mm.

TYPE.—Female, USNM 70703.

TYPE-LOCALITY.—Torres, Finca, Ponce, Puerto Rico (22 August 1933; R. G. Oakley, collector).

REMARKS.—The only specimen, a female, has a strongly compressed lateral fold on the elytra which is the most striking character. Probably this fold is not so developed in the male. It is possible that this is a dark specimen of a pale yellow-brown beetle, since the antennae, palpi, about mouth, and tarsal joints are pale. So far I have not seen any pale brown beetle from Puerto Rico with this lateral fold in the female.

Key to Species from Jamaica

1. Small, between 2.0 and 3.0 mm long 2
   Larger 3
2. No transverse groove separating front from clypeus, aedeagus broadly rounded at apex ***M. paulum*** Blake
   A transverse groove separating front from clypeus, aedeagus gradually narrowed to a point ***M. ashtonae*** Blake
3. Head with unusually wide and forwardly produced labrum with unusually large jaws ***M. prognathus,*** new species
   Head without unusual labrum or jaw development 4
4. Elytra less than three times as long as prothorax 5
   Elytra three times or more longer than prothorax 11
5. Broadly oblong oval, deep reddish brown to piceous 6
   Narrowly elongate oblong oval, yellowish or reddish brown 8
6. Reddish brown ..... ***M. farri*** Blake
   Piceous black 7
7. Prothorax almost twice as wide as long ..... ***M. flavolimbatum*** Blake
   Prothorax about a third wider than long ..... ***M. piceum*** Blake
8. Aedeagus with a pointed tip 9
   Aedeagus not pointed at tip 10
9. Prothorax with a broad reddish brown fascia ..... ***M. clarum,*** new species
   Prothorax with a spot or deeper brown area on each side ..... ***M. hardwarense,*** new species
10. Aedeagus long and narrow ..... ***M. fuscifrons,*** new species
    Aedeagus broad with truncate apex ..... ***M. howdenae,*** new species
11. Elytra rugose with striate punctures irregular and tending to be geminate ..... ***M. rugosum*** Blake
    Elytra not rugose with regular striate punctation 12
12. Elytra very long, almost four times as long as prothorax 13
    Elytra approximately three times as long as prothorax 15
13. Femora and tibiae pale with dark rings ..... ***M. annulare,*** new species
    Femora and tibiae entirely pale 14
14. Prothorax coarsely and densely punctate ..... ***M. rugicollis,*** new species
    Prothorax finely and densely punctate ..... ***M. acutulum*** Blake
15. Prothorax approximately twice as wide as long ..... ***M. rosae*** Bryant
    Prothorax not twice as wide as long 16
16. Prothorax with a hole-like depression on each side ..... ***M. dicoelotrachelus,*** new species
    Prothorax without a hole-like depression on each side 17
17. Front femora with small tooth ..... ***M. macrum*** Blake
    Front femora with large tooth 18
18. Approximately 5 mm in length ..... ***M. chapini*** Blake
    Between 3.5 and 4.0 mm in length ..... ***M. varium,*** new species

Metachroma howdenae, new species

FIGURE 161

DESCRIPTION.—About 3.5 mm in length, slender elongate oblong oval, somewhat shiny although with alutaceous head and pronotum, legs and basal joints of antennae, head, and prothorax reddish brown, elytra usually deep brown with pale yellow-brown area from humerus down side; a distinct fold along side, femora conspicuously toothed.

Head with interocular space approximately half width of head, no vertical line on front or transverse sulcus separating front from clypeus, distinctly but not densely punctate throughout, more coarsely so on clypeus, anterior margin of clypeus widely emarginate over labrum, reddish brown. Antennae with apical five or six joints deeper brown. Prothorax only a little wider than long with arcuate sides and prominent tooth at anterior angle, basal tooth not so conspicuous, constricted over head but below this swelling out into moderate convexity, basal margin not at all sinuate; surface reddish brown, finely alutaceous but a little shiny, with fine, dense punctures. Scutellum reddish brown. Elytra fully twice as long as prothorax and considerably wider, tapering to apex, with a conspicuous fold from humerus down side to apex, more marked in female; striate punctures visible to apex, close-set and distinct, a deep transverse depression be-

low basal callosities; surface distinctly alutaceous but somewhat shiny, usually deep reddish brown with pale yellow-brown area on side from humerus down a third or more length of elytra, some specimens with elytra entirely pale. Body beneath yellow-brown with abdomen frequently reddish brown, legs yellow-brown, front femora with large tooth, a smaller tooth on hind femora, claws with long tooth. Length, 3.2–3.7 mm; width, 1.4–1.6 mm.

TYPE.—Male, in Canadian National Collection, on loan from collection of Mrs. Anne Howden. Five paratypes in Canadian National Collection, on loan from collection of Mrs. Anne Howden; two paratypes in USNM.

TYPE-LOCALITY.—Hardwar Gap (4,000 feet), Jamaica (30 July 1966; A. T. Howden, collector).

REMARKS.—The distinctive feature in most specimens is the deep reddish brown coloring of the elytra with paler yellow-brown humeri and area below. There is also a strong costate fold from the shoulder all the way down to the apex; moreover, there is a large tooth on the anterior femora. The species is named in honor of Mrs. Anne Howden, who made a good collection in Jamaica.

Metachroma hardwarense, new species

FIGURE 156

DESCRIPTION.—Between 3.5 and 4.5 mm in length, elongate oblong oval, shining yellow-brown with a spot on occiput and vague deeper brown areas on each side of pronotum, dark apical joints of antennae; elytral striae very faint at apex, a conspicuous transverse depression below basal callosities, femora inconspicuously toothed.

Head with interocular space about half width of head; in most specimens a median depression on vertex and in some a vague suggestion of transverse sulcus separating clypeus, not very coarsely punctate with punctures on clypeus more distinct, anterior margin of clypeus emarginate; usually yellow-brown with a dark plaga down occiput, but this may be lacking. Antennae extending nearly to middle of elytra, apical six joints generally dark. Prothorax approximately a third wider than long with strongly arcuate sides and tooth at basal and apical angles, depressed over head but more convex behind, yellowish brown with vague darker spot on each side, basal margin not at all sinuate, rather finely punctate. Scutellum reddish brown. Elytra wider than prothorax and more than twice as long, with conspicuous transverse depression below basal callosities, striate punctation small and regular and becoming faint at apex, no lateral costa; shining yellow-brown, sometimes with a small dark submarginal spot below humerus. Body beneath usually pale yellow-brown but occasionally deeper brown, especially on prosternum and along sides of metasternum and abdomen. Legs pale, femora with small tooth, claws with short basal tooth. Length, 3.5–4.5; width, 1.5–2.0 mm.

TYPE.—Male, in Canadian National Collection. Two paratypes in Canadian National Collection; four paratypes in USNM.

TYPE-LOCALITY.—Hardwar Gap (4,000 feet), Jamaica (July 1966; A. T. Howden, collector).

OTHER LOCALITY.—Three miles west of Ecclesdown, Portland Parish, Jamaica, 7 August 1966, E. C. Becker.

REMARKS.—In shape this species is very much like *M. howdenae* except it is a little broader. There is no lateral costa on the elytra and the coloring is different, this species being yellowish brown except for the plaga on the head and the dark spots on the pronotum. The femora have smaller toothing than in *M. howdenae* and the aedeagus, instead of being truncate as in that species, is pointed, but not so narrowly as in *M. dicoelotrachelus* and *M. clarum*. The pronotum does not have the two holes as in *M. dicoelotrachelus* and it is somewhat wider and more finely punctate.

Metachroma varium, new species

FIGURE 157

DESCRIPTION.—Between 3.6 and 4.0 mm in length, elongate oblong oval, shining yellow-brown, sometimes entirely pale, usually with prothorax more or less dark, and elytra varying from pale yellow-brown to dark brown with humeri alone pale; pronotum moderately finely punctate, although some specimens have coarser punctures, elytra with regular small striate punctures visible to apex.

Head with interocular space less than half width of head, eyes large, remnants of a transverse sulcus dividing front from clypeus and often a short median line, surface alutaceous and densely and coarsely punctate, margin of clypeus over labrum almost straight; yellow-brown, often with dark median occipital plaga. Antennae long, joints 7–11 deep brown usually. Prothorax not twice as wide as long and not very convex, with depression over head, sides rounded, basal margin

straight, surface varying from finely to moderately coarsely and densely punctate and from shiny yellow-brown to deep brown. Scutellum usually dark brown. Elytra more than three times as long as prothorax with short intrahumeral sulcus and a transverse depression below basal umbones, striate punctures small, regular, and distinct to apex, no costation, surface shiny, varying from entirely yellow-brown to deep brown except for humeri, which are pale yellow-brown, margin usually dark. Body beneath varying from yellow-brown to dark brown, legs with femora having a dark ring near apex, front femora with large tooth, tooth on hind femora small, claws with long basal tooth. Length, 3.6–4.0 mm; width, 1.6–1.8 mm.

TYPE.—Male, in Canadian National Collection, on temporary loan. Three paratypes in Canadian National Collection, on temporary loan; two paratypes in USNM.

TYPE-LOCALITY.—Good Hope, Trelawny Parish, Jamacia, 17 August 1966, A. T. Howden.

REMARKS.—The unmarked specimens of this species are very much like the pale ones of *M. hardwarense*. Only by dissection for the aedeagus can these two species by readily distinguished. In *M. varium* the tooth on the anterior femora is larger and there is less space between the eyes. In the dark specimens in which only the humeri are pale, *M. varium* resembles in color *M. howdenae,* but the latter is a more slender species with distinct lateral costae; also the aedeagus is quite different.

Metachroma fuscifrons, new species

FIGURE 172

DESCRIPTION.—From 3.5 to 4.5 mm in length, elongate oblong oval, shining yellow-brown with fuscous brown alutaceous head, pronotum usually darker than elytra, finely punctate, elytra with striate punctures becoming faint near apex. Front femora with large tooth.

Head with interocular space fully half as wide as head, no depression or transverse sulcus on front, anterior margin of clypeus widely and shallowly emarginate over wide labrum; surface fuscous, alutaceous and coarsely punctate. Antennae pale yellowish or reddish brown. Prothorax almost as long as wide, with arcuate sides and small tooth at each angle, not very convex with straight basal margin, depressed over head, finely punctate, usually deeper yellowish brown than elytra. Scutellum brown. Elytra not three times as long as prothorax and considerably wider, with transverse depression below basal umbones, striate punctures small and regular, becoming faint at apex; surface unusually pale yellow-brown, but in one specimen a deeper brown coloring over most of it. Body beneath varying from pale yellow-brown to darker brown, apices of femora tending to be dark-ringed; femora of front legs with large tooth, hind femora with small tooth. Length, 3.5–4.5 mm; width, 1.5–2.0 mm.

TYPE. Male, in Canadian National Collection, on temporary loan from A. T. Howden collection. One paratype in Canadian National Collection, on temporary loan from A. T. Howden collection; two paratypes in USNM.

TYPE-LOCALITY.—Good Hope, Trelawny Parish, Jamaica (11 August 1966; A. T. Howden, collector).

REMARKS.—This is another species from Jamaica with very similar outward appearance to *M. varium, M. hardwarense,* and *M. howdenae*. The prothorax is a little narrower than in the others, being almost as long as wide; and the aedeagus is unusual in its narrow shape and parted tip. Only by dissecting for the aedeagus can this species be readily determined.

Metachroma chapini Blake, a larger species, while resembling *M. fuscifrons,* has different proportions; in the former the elytra are approximately three times as long as the prothorax, while in *M. fuscifrons* the elytra are not much more than twice as long.

Metachroma clarum, new species

FIGURE 158

DESCRIPTION.—Approximately 4.0 mm in length, elongate oblong oval, glistening yellow-brown, seven apical joints of antennae darker than basal, a dark brown spot or plaga down occiput and front, reddish brown transverse fascia on pronotum, aedeagus with a needle-fine pointed apex.

Head with interocular space half width of head, no transverse sulcus dividing clypeus, densely and coarsely punctate with anterior margin widely emarginate over labrum, in some specimens a median dark spot on front or a plaga down from occiput. Antennae slender with four basal joints pale, rest dark. Prothorax approximately a third wider than long, depressed over head, not very convex, with arcuate sides, surface very shiny, densely punctate, a broad reddish brown trans-

verse fascia, on sides deep yellowish brown. Scutellum reddish brown. Elytra not three times as long as prothorax, with small humeral prominences and short intrahumeral sulcus, traces of a transverse depression below basal umbones, shining yellow-brown with fine regular striate punctures becoming faint after middle. Body beneath pale yellow-brown in one specimen, in another specimen sides of prosternum reddish brown, legs with apex of femora dark-ringed; femora with small tooth, claws with short basal tooth. Length, 3.8–4.0 mm; width, 1.8–1.9 mm.

TYPE.—Male, in Canadian National Collection, on temporary loan from A. T. Howden collection. One paratype in USNM.

TYPE-LOCALITY.—Good Hope, Trelawny Parish, Jamaica (3 August 1966; A. T. Howden, collector).

REMARKS.—This is the third species described from Good Hope, and it is very similar to the other two, *M. fuscifrons* and *M. varium*, except that the elytral punctation is not so pronounced. Its chief distinguishing character is the very finely pointed apex of the aedeagus. It is an unusually shiny beetle.

Metachroma macrum Blake

FIGURE 159

Metachroma macrum Blake, 1962, pp. 176, 178.

DESCRIPTION.—About 4.0 mm in length, oblong oval, shining, deep reddish brown, head and pronotum densely but finely punctate; prothorax nearly as wide as elytra, contracted over head, elytra with fine striate punctures becoming faint at apex, femora toothed.

Head with interocular space more than half width of head, densely punctate and alutaceous without any sulcus separating clypeus or median line down front; reddish brown. Antennae extending to middle of elytra, yellowish brown. Prothorax with widely arcuate sides, a small tooth at each angle, depressed over head, finely and densely punctate, shining deep reddish brown. Elytra a little wider than prothorax and three times as long with short intrahumeral sulcus and distinct transverse depression below basal callosities; striate punctures fine, closely set, becoming very faint at apex, shining deep yellowish brown. Body beneath and legs yellowish brown, femora minutely toothed, claw with short basal tooth. Length, 3.8 mm; width, 1.8 mm.

TYPE.—Male, USNM 65897. Two paratypes in Science Museum, Institute of Jamaica, Kingston.

TYPE-LOCALITY.—Hardwar Gap, St. Andrew Parish, Jamaica (28 June 1959; T. H. Farr, collector).

REMARKS.—This species is distinguished from the other small Jamaican species by its somewhat oblong shape, wide head, and wide and rather flat prothorax that is constricted over the head.

Metachroma dicoelotrachelus, new species

FIGURE 160

DESCRIPTION.—From 3.5 to 4.5 mm in length, elongate oblong oval, shining, varying from yellow-brown with slightly darker head and pronotum to pronotum having a distinct fascia across it and from elytra being entirely pale to having reddish brown spots or being almost entirely piceous except for pale humeri; prothorax with a distinct round hole-like depression on either side, finely and densely punctate, striate punctures on elytra not visible over basal umbones or in apical half.

Head with interocular space half width of head, a more or less evident transverse sulcus dividing clypeus from front, and a short median line on front; surface coarsely punctate and on clypeus alutaceous, pale yellow-brown in pale specimens, usually with a reddish brown occiput or dark plaga down front, in dark specimens entirely dark. Antennae even in palest specimens with joints 6–11 dark. Prothorax approximately a third wider than long with rounded sides and small tooth at each angle, not very convex and depressed over head and with a distinct round depression on each side; surface more or less alutaceous and densely and rather rugosely punctate, often a bare impunctate line in middle, color varying from pale yellow-brown to entirely dark, usually with an indefinite darker median area. Scutellum dark. Elytra wider than prothorax and more than three times as long, in female a lateral costa in apical half, not so developed in male; striate punctures not evident over well-developed basal callosities or in apical half but enlarged in transverse depression below basal callosities and in intrahumeral sulcus; color varying from entirely pale yellow-brown to having two reddish brown lateral spots below humerus, a dark spot in transverse depression and an elongate spot below middle near suture; one specimen entirely dark except for pale humeri. Body beneath varying in color from reddish brown with pale abdomen to entirely

dark, legs also variable in color but usually pale, with apex of femora dark-ringed; femora minutely toothed, claws with short basal tooth. Length, 3.3–4.5 mm; width, 1.5–2.0 mm.

TYPE.—Female, in Canadian National Collection. Five paratypes in Canadian National Collection; four paratypes in USNM.

TYPE-LOCALITY.—Blue Mountain Peak (7,400 feet), Jamaica (27–28 July 1966; Howden and Becker, collectors).

OTHER LOCALITY.—Hardwar Gap, Jamaica, 2–6 July 1966, Howden and Becker.

REMARKS.—The distinguishing character of this species is the hole-like depression on each side of the thorax. There is also a broad costa on the side (usually at middle) on the elytra of the female, less-developed in male.

Metachroma rosae Bryant

FIGURES 162, 163

Metachroma rosae Bryant, 1923, pp. 261–265.

DESCRIPTION.—Between 4.0 and 5.0 mm in length, broadly oblong oval, lustrous yellow-brown with reddish brown to piceous markings across occiput, a band across pronotum, and variable and irregular markings over elytra, apex of femora and base of tibiae as well as outer joints of antennae tending to be reddish brown; pronotum wide and rather flat, minutely punctate, elytra with striate punctation inconspicuous except in transverse basal depression, apex smooth.

Head with interocular space less than half width of head, eyes large, a faint transverse sulcus dividing clypeus from front, anterior margin of clypeus emarginate over labrum, clypeus alutaceous and finely punctate, front more shiny, with scattered fine punctures, yellow-brown, with occiput and sometimes front with dark plaga, a small median depression on front. Antennae slender, extending below humeri, outer joints with some deeper brown basal darkening. Prothorax approximately twice as wide as long, not very convex, with widely rounded sides and small tooth at each angle, polished, with exceedingly fine punctures, yellow-brown, with wide deeper brown areas on each side. Scutellum reddish brown. Elytra not much wider than prothorax and approximately three times as long, a slight intrahumeral sulcus and a transverse depression below basal callosities; striate punctation inconspicuous except in transverse depression and entirely missing towards apex; yellow-brown with reddish brown to piceous markings, varying from a few dark marks in transverse depression and a spot below on the side to specimens with sutural area dark and an irregular dark area from humerus along side, often broken into two parts. Body beneath usually reddish brown with abdomen tending to be paler, apex of femora and base of tibiae usually deeper brown; femora not toothed, claws with long tooth. Length, 3.8–5.0 mm; width, 2.0–2.4 mm.

TYPE.—In BMNH.

TYPE-LOCALITY.—Manchester, Jamaica (25 June 1937, M. Bovell; Mandeville, on rose, A. H. Ritchie; collector).

OTHER LOCALITIES.—*Jamaica:* Balaclava, April 1937, M. Bovell; Mandeville, on rose, A. H. Ritchie; January–April 1909, E. P. Van Duzee; North Coast, January 1954, G. and Helga Frey; Hardwar Gap (4,000 feet), July 1966, A. Howden, Moneague, St. Ann, 20 August 1966; Mizpah, Manchester, 16 August 1966, A. Howden; Whitefield Hall, St. Thomas, 27 July 1966, A. Howden; Mahogany Vale, St. Andrew, 20 July 1966, H. F. Howden.

REMARKS.—As in so many other species of this genus there is considerable variation in markings, especially on the elytra. Some specimens are almost entirely without dark markings while others have deeper brown spots almost covering the elytra. The large flat prothorax and the very lightly punctate elytra are distinguishing characters of the species.

Metachroma piceum Blake

FIGURE 164

Metachroma piceum Blake, 1948, p. 278.

DESCRIPTION.—About 4.5 mm in length, ovate, shining, deep reddish brown to piceous with pale legs, femora dark-ringed at narrowed apex, tibiae in part dark, elytra with paler streaks along basal margin and on humeri and pale along sides at apex, base of antennal joints 3–11 dark, all femora toothed.

Head with interocular space about half its width, rounded over occiput with a broad front having a short median line, dark piceous with a reddish brown area on each side of front, clypeus and labrum also reddish brown; surface dull alutaceous with fine, shallow punctures. Antennae not reaching middle of elytra, two

basal joints pale, remainder with pale apices. Prothorax wider than long with widely arcuate sides, a small tooth at each angle; surface polished, very minutely punctate, piceous with deep reddish brown streaks along anterior and basal margins, possibly in paler specimens only a piceous transverse band. Elytra with striate punctures coarsest in transverse depression below basal callosities, becoming fine at apex; shining deep piceous with reddish brown streaks along short, raised basal costae and on humeri and a pale margin along the apex and partly on sides. Body beneath deep reddish brown with tip of abdomen and legs paler, femora near apex banded and tibiae with deeper color near base, all femora with small tooth. Length, 4.4–4.6 mm; width, 2.6 mm.

TYPE.—Male, MCZ 27824. One paratype in MCZ.

TYPE-LOCALITY.—Main Range, Blue Mountains (5,000–7,388 feet), Jamaica (17–19 August 1934; P. J. Darlington, Jr., collector). Paratype collected at Whitfield Hall, Blue Mountains (near 4,500 feet), Jamaica (13–20 August 1934; P. J. Darlington, Jr., collector).

REMARKS.—Although the pale coloration at the apex of the elytra reminds one of beetles of the *M. adustum* group, this species does not belong with that group. It is more oval and with reddish brown markings that suggests some specimens are paler. Also, the eyes are more widely set.

Metachroma flavolimbatum Blake

FIGURE 166

Metachroma flavolimbatum Blake, 1948, p. 277.

DESCRIPTION.—About 5.0 mm in length, oblong oval, shining piceous with head (in part), basal antennal joints, anterior margin of prothorax, margin of elytra and legs reddish brown, femora banded near apex.

Head with interocular space less than half its width, no distinct sulcus between front and clypeus, a median depression on front, surface alutaceous and rather densely and obsoletely punctate, occiput and front piceous, clypeus reddish brown, jaws piceous. Antennae extending to middle of elytra, with basal joints paler. Prothorax not twice as broad as long with strongly arcuate sides, a small tooth at basal and anterior angles, moderately convex, surface very finely and obsoletely punctate, lustrous piceous with anterior edge reddish brown. Elytra with small humeri, and a slight transverse depression below basal callosities, striate punctures deeply impressed and dense, becoming finer and shallower in apical half; sides from humerus to apex paler, the pale area wider at apex. Body beneath reddish brown, shining, legs pale yellow with a dark band about narrowed part of femora at apex, and a dark streak down tibiae; hind femora with faint trace of tooth. Length, 5.0 mm; width, 2.8 mm.

TYPE.—Male, USNM 58779.

TYPE-LOCALITY.—Mess Castle, near Antully, St. Thomas Parish, Jamaica (5 November 1928; C. R. Orcutt, collector.)

REMARKS.—This is another of the *adustum* group of species. It is slightly larger than most of the specimens of *M. adustum,* the aedeagus has a shorter point at the tip, and the antennae are mostly dark.

Metachroma paulum Blake

FIGURE 165

Metachroma paulum Blake, 1962, pp. 178–179.

DESCRIPTION.—About 2.5 mm in length, broadly oblong oval, lustrous yellowish or reddish brown to piceous black, head and pronotum densely and distinctly punctate, elytra with striate punctures distinct only in basal half, becoming indistinct towards apex and over basal callosities.

Head with interocular space less than half width of head, shining reddish brown, very densely punctate, punctures becoming coarser on clypeus, no frontal depression or sulcus separating clypeus, anterior margin of latter widely emarginate over labrum. Antennae reddish brown with darker apical joints, slender, extending to middle of elytra. Prothorax about twice as wide as long with well-rounded sides smoothly convex with a little constriction over head, densely and distinctly punctate, shining reddish brown to piceous. Elytra shining reddish brown to piceous with striate punctures not distinct over basal callosities or much below middle. Body beneath and legs reddish brown or piceous, femora not toothed; claws with long tooth. Length, 2.5 mm; width, 1.5 mm.

TYPE.—USNM 65899. Two paratypes in USNM; one paratype in Science Museum, Institute of Jamaica, Kingston.

TYPE-LOCALITY.—Two miles northeast of Spanish Town, Sligoville Road, St. Catherine Parish, Jamaica (16 September 1957; T. H. Farr, collector).

OTHER LOCALITIES.—*Jamaica:* Adelphi, St. James

Parish, 15 July 1966; Mahogany Vale, 20 July 1966, A. T. Howden.

REMARKS.—This species is similar in size and shape to the Cuban *Metachroma testaceum elachistum* Blake, but with an entirely different aedeagus. It is the smallest species so far found in Jamaica, being a trifle smaller than *M. ashtonae* Blake, which is a pale yellow-brown beetle with small dark elytral spots.

Metachroma ashtonae Blake

FIGURE 169

Metachroma ashtonae Blake, 1966, p. 215.

DESCRIPTION.—Between 2.0 and 3.0 mm in length, oblong oval, shining yellow-brown, sometimes without markings, but sometimes with dark frontal spot on head and often with a faint reddish brown M-shaped marking on prothorax, two small spots at base, and two small spots below middle of each elytron, prothorax finely and densely punctate, elytra with striate punctation becoming fainter near apex, a well-marked transverse depression below basal callosities.

Head with interocular space barely half width of head, a median transverse groove separating clypeus, a median line down front; finely punctate above and more coarsely so on clypeus. Sometimes with round dark frontal spot. Antennae extending below humeri, outer joints a little deeper in coloring. Prothorax large, nearly as wide as elytra, not very convex, with rounded sides and small tooth at basal and apical angles, surface somewhat alutaceous and densely punctate, a faint M-shaped deeper brown marking usually across disc. Scutellum reddish brown. Elytra yellowish brown, sometimes without any markings but usually with two elongate basal spots, one in humeral sulcus wider than median basal spot, below middle two more dark spots, one near suture, the other slightly below in middle; striate punctation deep and distinct in basal half, in apical half becoming fine and shallow, on sides striate punctures more deeply impressed with intervals becoming slightly costate, a distinct transverse depression below basal callosities. Body beneath yellowish brown, all femora without toothing, claws with short tooth. Length, 2.1–2.9 mm; width, 1.0–1.3 mm.

TYPE.—Female, USNM 68199.

TYPE-LOCALITY.—Christiana, Manchester Parish, Jamaica (4 November 1959; T. H. Farr, collector).

OTHER LOCALITIES.—*Jamaica:* Whitfield Hall, St. Thomas Parish, 28 July 1966, A. T. Howden; Barbecue Bottom, Trelawny Parish, 4 and 10 August 1966, H. F. Howden; Duncans, Trelawny Parish, 14 August 1966, Howden and Becker.

REMARKS.—This species is only slightly larger than *M. paulum* and it is paler, often with spotting on front of head, across pronotum, and numerous small spots on elytra. It is named after Mary Ashton, an English biology teacher in Jamaica for some years.

Metachroma rugosum Blake

FIGURE 167

Metachroma rugosum Blake, 1962, pp. 179–180.

DESCRIPTION.—Between 4.4 and 5.8 mm in length, elongate oblong oval, not very shiny, with finely alutaceous head and pronotum which are rather sparsely and finely punctate, elytra irregularly, coarsely, and semi-geminately punctate, with somewhat costate intervals, especially marked near base, variable in color from pale yellowish brown to deep reddish brown, head often with a dark mark down front, pronotum with a deeper brown spot on each side, sometimes a transverse fascia, elytra without markings, femora and tibiae dark-ringed.

Head with interocular space about half width of head, a median line down front, about which are scattered fine punctures, surface dull alutaceous throughout, anterior margin of clypeus broadly emarginate; yellow-brown, sometimes with occiput and a median frontal area dark. Antennae slender, extending nearly to middle of elytra, yellowish brown with deeper brown outer joints. Prothorax somewhat wider than long with rounded sides and small tooth at each angle, moderately convex, surface dull alutaceous with very fine, not dense punctures, deep yellowish or reddish brown, sometimes in paler specimens with only a faint trace of dark areas on each side, in well-marked specimens a deep reddish brown fascia across. Elytra more than three times as long as prothorax and much wider, with prominent humeri and deep depression below basal callosity, striate punctures deeply impressed and exceedingly irregular with a tendency to being geminate, especially in depression and below humeri, an irregular subcostate rugosity over whole surface, which is not shiny but dull and varying in color from yellow-

ish to deep reddish brown. Body beneath and legs yellowish brown with sides of posternum and breast in some specimens darker. Femora toothed and at apex dark-ringed, tibiae ringed at middle, claws with short basal tooth. Length, 4.4–5.8 mm; width, 2.0–3.0 mm.

TYPE.—Female, USNM 65900.

TYPE-LOCALITY.—West side of Mount Horeb, St. Andrew Parish, Jamaica (11 April 1955; T. H. Farr, collector).

OTHER LOCALITY.—Hardwar Gap, 4,000 feet (4–25 July 1966; Howden and Becker, Mrs. A. Howden, collectors).

REMARKS.—This species has the most irregularly striate punctate elytra of any species of *Metachroma;* in addition, it has a rugose, subcostate surface.

Metachroma chapini Blake

FIGURE 174

Metachroma chapini Blake, 1944, pp. 250–251.

DESCRIPTION.—About 5.0 mm in length, elongate oblong oval, somewhat shiny, very finely alutaceous, head and prothorax reddish brown with darker brown occiput and median line on front of head and dark areas across prothorax, elytra paler yellow-brown; femora dark-ringed at apex and strongly toothed.

Head with interocular space less than half width of head, reddish brown with a dark occiput and median line down front, clypeus paler, mouthparts dark; surface alutaceous, coarsely punctate, anterior margin of clypeus emarginate. Antennae extending well below humeri, reddish brown with the apical joints a little darker. Prothorax with rounded sides and small tooth at each angle, moderately convex, contracted over head, surface finely alutaceous and with numerous punctures; deep reddish brown with deeper brown areas on each side connected along base. Scutellum pale with deeper colored margin. Elytra considerably wider than prothorax and approximately three times as long, a transverse depression below basal callosities, surface shining, tending to be paler than prothorax, in one specimen, the male, entirely yellow-brown, but in the female an indefinite darker area on side of each elytron below humerus, and in this specimen also the punctures deeper in coloring, thus appearing coarser than in pale specimen; striate punctures distinct to apex. Body beneath reddish brown, shining, legs pale with dark ring at apex of femora, anterior femora with pronounced tooth, posterior femora with very small tooth, claw with short basal tooth. Length, 4.9–5.2 mm; width, 2.0–2.2 mm.

TYPE.—Male, USNM 56947, with one female paratype.

TYPE-LOCALITY.—Newport, Jamaica (21 April 1937; E. A. Chapin and R. E. Blackwelder, collectors).

REMARKS.—This is one of the narrowly elongate species of *Metachroma* that are usually without elytral markings, but one specimen of this species shows a tendency towards deeper brown areas along the side of the elytra.

Metachroma acutulum Blake

FIGURE 168

Metachroma acutulum Blake, 1962, p. 178.

DESCRIPTION.—Approximately 5.0 mm in length, elongate oblong oval, shining pale yellowish brown with deeper brown occiput, and two roundish brown areas on pronotum, head and prothorax distinctly but not coarsely punctate, elytra with striate punctures becoming faint at apex and on sides, femora minutely toothed.

Head with interocular space approximately half width of head, occiput deep reddish brown, with a dark median impressed line down the pale yellow-brown front, no transverse sulcus separating clypeus, surface alutaceous and punctate, anterior margin of clypeus nearly straight over labrum, tip of jaws piceous. Antennae long and slender and extending to middle of elytra, outer joints deeper in color. Prothorax small, with rounded sides, a tooth at each angle, constricted and somewhat depressed over head, becoming more convex before middle, shining, densely but not coarsely punctate, yellowish brown with two round brown areas, one on each side. Scutellum brown. Elytra not quite four times as long as prothorax and much wider, with prominent humeri, a deep intrahumeral sulcus, and depression below basal callosities; striate punctation regular, fading on sides and apex and over basal callosities; surface shining yellow-brown without any dark markings. Body beneath and legs also yellow-brown, a little deeper at apex of femora and base of tibiae, femora minutely toothed. Length, 4.8 mm; width, 2.1 mm.

TYPE.—Male, USNM 65898.

TYPE-LOCALITY.—Hardwar Gap, St. Andrew Parish. Jamaica (2 March 1956; T. H. Farr, collector).

REMARKS.—This is one of the elongate species of *Metachroma* with toothed femora and elytra narrowed at the apex, strongly resembling *M. chapini* from Jamaica, but it is a paler colored beetle with less convexity of the prothorax and a shiny, not alutaceous surface. In *M. chapini* the elytra are three times as long as the prothorax, but in *M. acutulum* the proportions are slightly different, the elytra being considerably longer, nearly four times the length of the prothorax, and the beetle is not so narrow.

Metachroma rugicollis, new species

FIGURE 170

DESCRIPTION.—About 5.0 mm in length, elongate oblong oval, shining, pale yellow-brown with apical joints of antennae and two spots on pronotum a deeper reddish brown. Head and prothorax coarsely and rugosely punctate, elytra with regular rows of striate punctures.

Head with interocular space slightly less than half width of head; surface very rugosely punctate throughout, with a median brown depression on front; no transverse sulcus, anterior margin of clypeus widely emarginate over labrum, jaws reddish brown. Antennae slender, not reaching middle of elytra, apical joints reddish brown. Prothorax approximately a third wider than long with arcuate sides and small tooth at each angle, not very convex, with a depression over head, surface coarsely punctate and rugose; yellow-brown with reddish brown area on each side. Scutellum reddish brown. Elytra considerably wider than prothorax and nearly four times as long, with prominent humeri and a transverse depression below basal umbones, striate punctation near base with slightly costate intervals, punctures small, closely set and impressed, visible to apex. Body beneath and legs entirely pale yellow-brown, femora conspicuously toothed, claws with long tooth. Length, 5.0 mm; width, 2.2 mm.

TYPE.—Female, in Canadian National Collection.

TYPE-LOCALITY.—Hardwar Gap (4,000 feet), Jamaica (21 July 1966; Howden and Becker, collectors).

REMARKS.—The rough, punctate surface of the head and prothorax is the chief character in differentiating this species. The prothorax is very small compared with the rest of the body, the elytra being nearly four times longer and much wider than the prothorax.

Metachroma annulare, new species

FIGURE 171

DESCRIPTION.—About 4.5 mm in length, elongate oblong oval, pale yellow-brown with a dark median line down occiput to between antennal sockets, a rounded dark spot on either side of pronotum and on each elytron a dark spot in transverse depression below basal umbone and two other dark spots along side below humerus, and a long irregular dark area below in middle, legs with a dark ring at apex of femora, and at base and middle of tibiae, antennae with darker apical joints; finely punctate surface throughout.

Head with interocular space less than half width of head, a median depressed line down front and a faint transverse one separating clypeus, these lines both dark, occiput and front finely and sparsely punctate, shiny, clypeus more alutaceous with a few punctures, anteriorly widely and shallowly emarginate over labrum, jaws dark. Antennae long and slender, apical joints somewhat wider, two basal joints yellow-brown, rest reddish brown. Prothorax less than a third wider than long, with arcuate sides and small tooth at each angle, not very convex but smoothly rounded, slightly depressed over head, shining, finely and not densely punctate, pale yellow-brown with a reddish brown round spot on each side, very faintly connected with paler spot anteriorly. Scutellum reddish brown. Elytra more than three times as long as prothorax and wider, with small prominent humeri and transverse depression below basal umbones, striate punctures small and regular, becoming fainter after middle, apex nearly smooth; pale yellow-brown with a piceous spot in transverse depression, two other piceous spots along side, the lower one connecting along side with a larger piceous area extending down below middle but not reaching suture. Body beneath with breast reddish brown, prosternum and abdomen paler yellow-brown, legs with femora near apex ringed, base and middle of tibiae also dark-ringed, femora not toothed, claws with long basal tooth. Length, 4.5 mm; width, 2.0 mm.

TYPE.—Female, in Canadian National Collection.

TYPE-LOCALITY.—Three miles west of Ecclesdown, Portland Parish, Jamaica (7 August 1966; E. C. Becker, collector).

REMARKS.—This slender, elongate beetle has rather unusual dark elytral markings and dark rings about both femora and tibiae. Unfortunately, only a single specimen, a female, is known.

Metachroma farri Blake

FIGURE 175

Metachroma farri Blake, 1962, p. 180.

DESCRIPTION.—Between 4.5 and 5.8 mm in length, broadly oblong oval, shining, pronotum very finely punctate, mirror-smooth, lustrous deep reddish brown, elytra paler yellow-brown with striate punctation becoming fine at apex.

Head with interocular space a little more than half width of head, occiput smooth, shining, very finely punctate, usually with a median depressed line on front, clypeus alutaceous and finely punctate, widely emarginate over labrum, jaws large and piceous. Antennae extending to middle of elytra, slender, yellow-brown. Prothorax large, with tiny tooth at each angle, moderately convex, polished, very finely punctate, deep reddish brown. Scutellum brown. Elytra not much wider than prothorax and not three times as long, strongly convex, humeri small, only a trace of intrahumeral sulcus, no transverse sulcus, shining yellowish brown, striate punctures moderately coarse, regular and rather deeply impressed in basal half becoming shallow at apex. Body beneath and legs yellowish or reddish brown, sometimes almost piceous, femora not toothed, claw with short basal tooth. Length, 4.5–5.8 mm; width, 2.5–3.0 mm.

TYPE.—Male, USNM 65901. Three paratypes in USNM; two paratypes in Science Museum, Institute of Jamaica, Kingston.

TYPE-LOCALITY.—Palisadoes, Kingston, Jamaica (1957 and 1961; T. H. Farr, collector).

OTHER LOCALITIES.—*Jamaica*: Duncans, Trelawny Parish, August 1966, Howden and Becker; Palisadoes, 25 August 1966, Howden and Becker, A. T. Howden; Kingston, June 1908, M. Cameron.

REMARKS.—This is another of the broadly oblong species of which *M. ustum* LeConte is representative. It is very much like *M. leiotrachelus* of Puerto Rico but is larger and has a slightly different aedeagus. All members of this group have a large, lustrous prothorax, deeper colored than the elytra, and strongly convex elytra. In all, the aedeagus is broad at the apex.

Metachroma prognathus, new species

FIGURE 173

DESCRIPTION.—From 5.6 to 6.0 mm in length, elongate oblong oval, shining yellow-brown with occiput of head sometimes dark and two indistinct reddish brown areas on pronotum. Head with unusual enlargement and prolongation of labrum and jaws anteriorly, all femora conspicuously toothed, punctation fine on both pronotum and elytra.

Head with interocular space half width of head, a frontal depression and faint trace of sulcus between antennal sockets, then clypeus bent inward and widely emarginate over an enlarged and forward-produced labrum, on either side of which large jaws protrude, also a prominent enlargement about antennal sockets; occiput in one of the two specimens dark, also a dark spot in median depression; surface alutaceous and coarsely but not very densely punctate. Antennae unusually long and slender, extending almost to middle of elytra, outer joints darker. Prothorax not twice as wide as long, with somewhat rounded sides, unusually narrowly margined, a tooth at each angle, basal margin straight, not at all sinuous, anteriorly somewhat depressed over head, surface moderately coarsely but not densely punctate, slightly alutaceous, pale yellow-brown with a faint reddish brown area on each side. Scutellum reddish brown. Elytra elongate, tapering towards apex, with small humeral prominences and small basal callosities with depression below, striate punctures close-set, regular and small, towards apex becoming faint. Body beneath entirely pale yellow-brown, legs long and slender, all femora conspicuously toothed, front ones with unusually large tooth, claws with long tooth. Length, 5.6–6.0 mm; width, 2.2–2.5 mm.

TYPE.—Male, USNM 70702. One paratype in Science Museum, Institute of Jamaica, Kingston.

TYPE-LOCALITY.—Hardwar Gap, Portland Parish, Jamaica (11 March 1966; T. H. Farr and D. W. Duckworth, collectors).

REMARKS.—This large, elongate beetle has a most unusual development of the labrum and jaws which project at almost right angles from the front forward. It would be interesting to know the food plant of these beetles that causes them to have developed such an abnormally large jaw, so unlike the other species of the genus. All the femora are conspicuously toothed.

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Key to Species from Dominica

1. From 3.5–4.5 mm in length, prothorax almost as broad as elytra and nearly twice as wide as long ..... ***M. bredeni*** Blake

   Approximately 2.5 mm in length, prothorax not as broad as elytra, and not twice as wide as long ..... ***M. gagnei*** Blake

Metachroma gagnei Blake

FIGURE 145

Metachroma gagnei Blake, 1968, p. 62.

DESCRIPTION.—Approximately 2.5 mm in length, oblong oval, shining, yellow-brown with a reddish brown basal spot and two lateral spots on each elytron, striate punctures on elytra feeble over basal callosities and fading on sides and at apex; prothorax impunctate, antennae with apical joints darker.

Head with interocular space less than half width of head, occiput and front nearly impunctate, a transverse sulcus between antennal sockets, clypeus nearly impunctate. Antennae long and slender with apical joints thicker and darker. Prothorax evenly rounded but not very convex, with arcuate sides and depression over head; mirror-smooth, yellow-brown. Scutellum reddish brown. Elytra with striate punctures nearly obsolete over basal callosities and indistinct on sides and at apex; one median long reddish brown basal spot on each elytron and two others along sides—one below humerus and the other, larger, at about the middle. Body beneath yellow-brown, shining, legs pale, femora not toothed. Length, 2.5 mm; width, 1.3 mm.

TYPE.—Female, USNM 69720.

TYPE-LOCALITY.—Path to Cabrits, Dominica (2 April 1966; R. G. Gagne, collector).

REMARKS.—Only a single specimen of this small species is known. It is about the size of *M. testaceum* Blatchley from the tip of Florida and also from Cuba. It is the smallest species of *Metachroma* yet collected from Dominica.

Metachroma bredeni Blake

FIGURES 141, 142

Metachroma bredeni Blake, 1958, pp. 94, 96.

DESCRIPTION.—Between 3.6 and 4.3 mm in length, broadly oblong oval, yellow or orange-brown, sometimes with wide deeper reddish brown areas on each side of pronotum and on each elytron a piceous spot in intrahumeral sulcus connecting narrowly with another larger spot in transverse depression below, and a spot on side parallel to this, two other spots along side near middle, some of these spots may be missing or elytra may be entirely pale; head and prothorax not at all shiny but alutaceous, striate punctation on elytra becoming indistinct near apex.

Head with interocular space a little less than half width of head, occiput rounded, smoothly alutaceous, scarcely punctate, although clypeus frequently wrinkled, a distinct sulcus separating front from clypeus, and a median depressed line on front, anterior margin of clypeus with very little emargination, dull yellowish or reddish brown, often with dark median line and dark transverse sulcus, jaws piceous. Antennae extending below humeri, sometimes entirely pale but often with apical joints (which are wider) also darker. Prothorax not quite twice as broad as long, with well-rounded sides, not very convex, with a short transverse depression over head, not shiny but alutaceous, also usually wrinkled, either entirely reddish brown or with a deeper brown area on each side. Scutellum yellow-brown. Elytra about three times as long as prothorax and only a little wider, with a short intrahumeral sulcus and faint transverse depression below inconspicuous basal callosities, striate punctation becoming faint towards apex, surface shiny, not at all alutaceous, paler yellow-brown than prothorax, either entirely pale or with piceous spotting as indicated above, some of spots may be missing. Body beneath reddish brown with abdomen and legs more yellowish brown, femora not toothed, claws with a short basal tooth. Length, 3.6–4.3 mm; width, 2.0–2.2 mm.

TYPE.—Female, USNM 64533.

TYPE-LOCALITY.—Castle Bruce Junction, Dominica (21 March 1956; J. F. G. Clarke, collector).

OTHER LOCALITIES.—*Dominica:* 2.2 miles east of Pont Casse, 1 May 1964, O. S. Flint, Jr.; 1 mile west of Pont Lolo, 1,300 feet, March and June 1965, J. F. G. Clarke and T. M. Clarke.

REMARKS.—This species was originally described from a single female collected by Dr. Clarke in 1956. Later other specimens were collected on the Breden-

Smithsonian expedition in 1964 and 1965, in which were taken male specimens and others showing considerable variation in markings.

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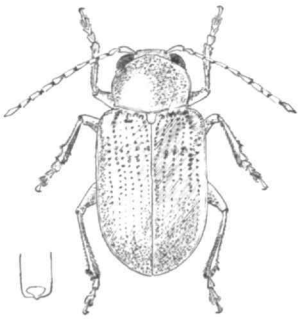
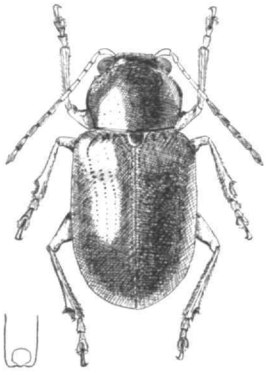
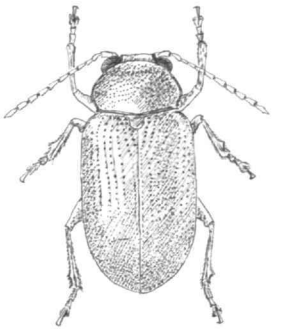


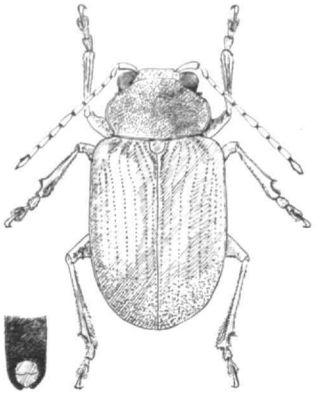
1. *Metachroma laevicollis* Crotch, type; aedeagus from specimen from Mandeville, La.



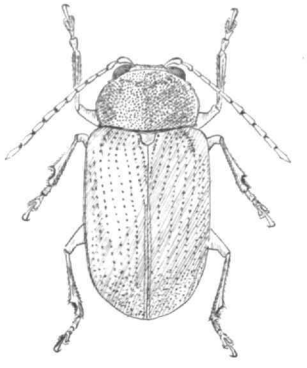
2. *M. laevicollis* Crotch, Phillipsburg, N.J.



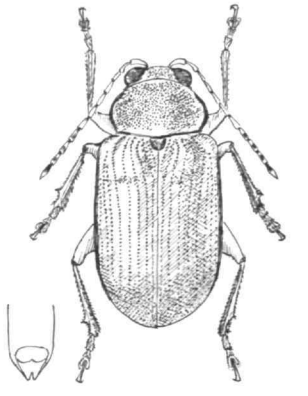
3. *M. marginale* Crotch, type.



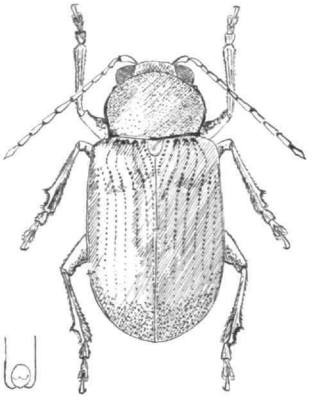
4. *M. orientale*, n. sp.



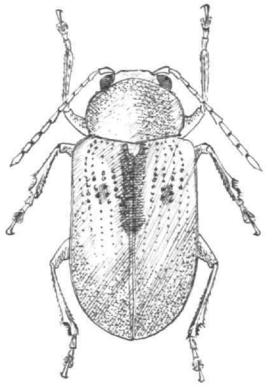
5. *M. orientale*, n. sp.; type in LeConte collection as *M. pallidum* (Say).



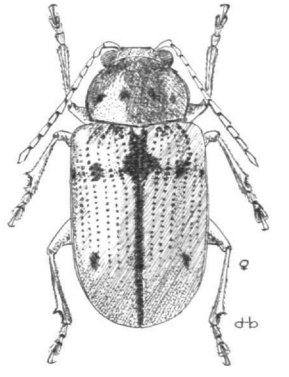
6. *M. marginale* Crotch, Theodore, Ala.



7. *M. pallidum* (Say), Sheridan Kans.

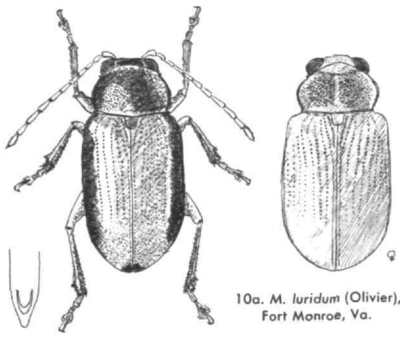


8. *M. pallidum* (Say); in LeConte collection as *M. pallida dubiosa*.



9. *M. carolinense*, n. sp., type.

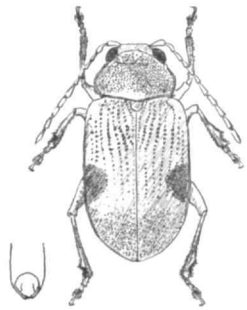
FIGURES 1–9



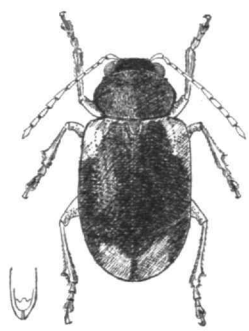
10. *Metachroma luridum* (Olivier), type of *Metachroma vicinum* Crotch.

10a. *M. luridum* (Olivier), Fort Monroe, Va.

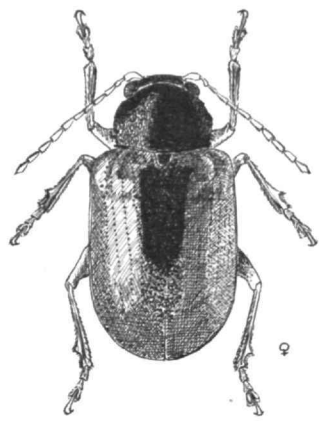
11. *M. laterale* Crotch, type.



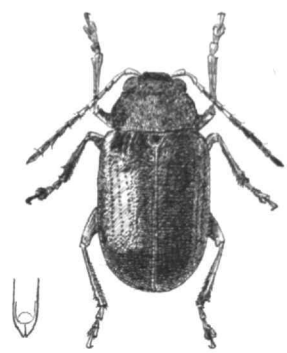
12. *M. laterale* Crotch, Topeka, Kans.



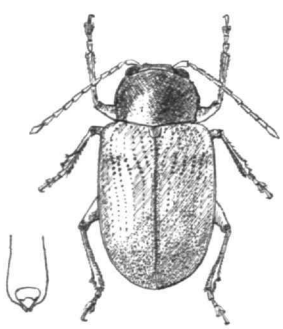
13. *M. quercatum* (Fabricius), from "5-mile beach," N. J.



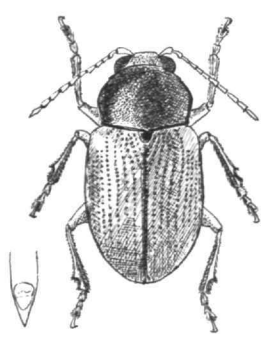
14. *M. quercatum* (Fabricius), type of *M. puncticolle* LeConte.



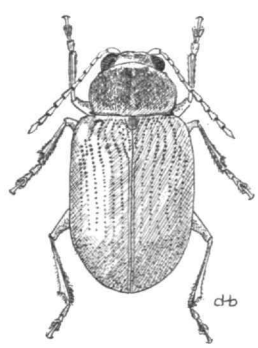
15. *M. quercatum* (Fabricius), Bethane, S. C.



16. *M. pellucidum* Crotch, type.

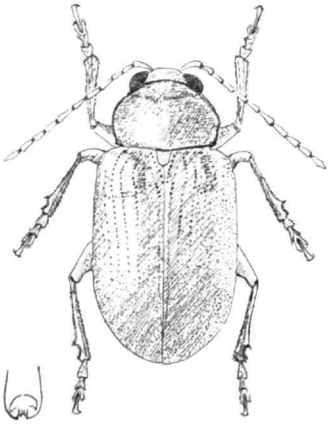


17. *M. texanum* Schaefter, Brownville, Tex.

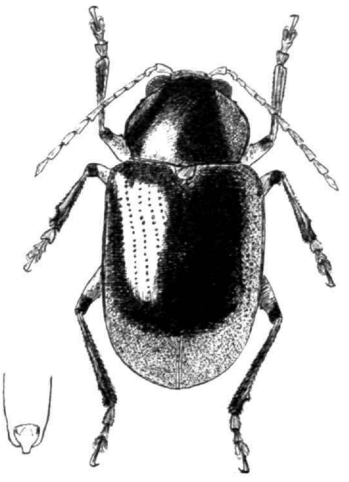


18. *M. quercatum* (Fabricius), type of *M. strigicolle* Blatchley.

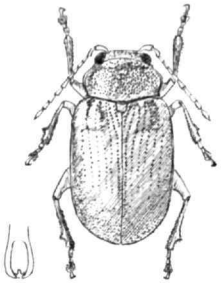
FIGURES 10–18



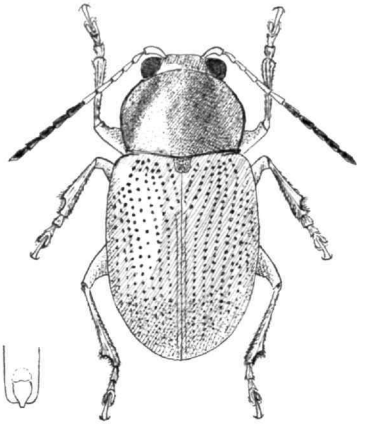
19. *Metachroma floridanum* Crotch, type.



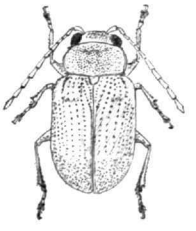
20. *M. adustum terminale* Horn, Key West, Fla.



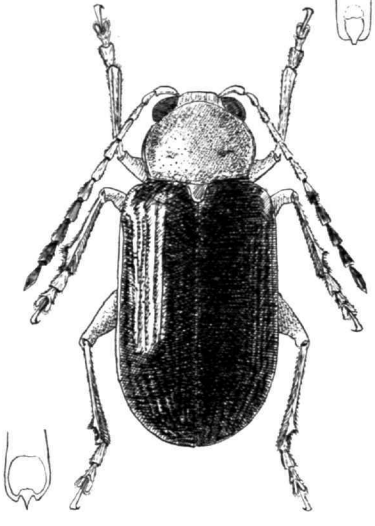
21. *M. anaemicum* Fall, Tampa, Fla.



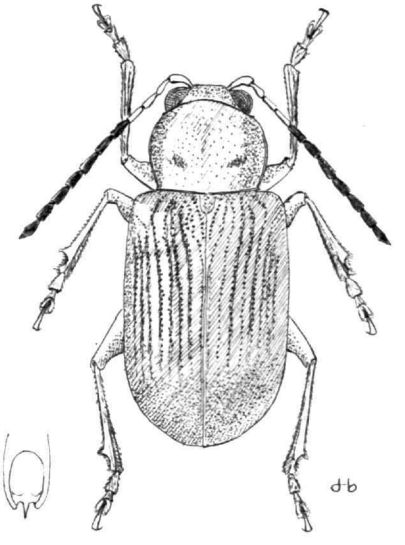
22. *M. viticola* Linell, paratype.



23. *M. anaemicum* Fall, type.

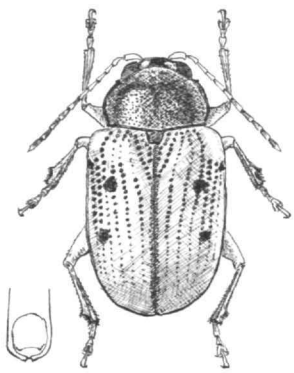


24. *M. angustulum* Crotch, type; aedeagus from all-dark specimen, Montana.

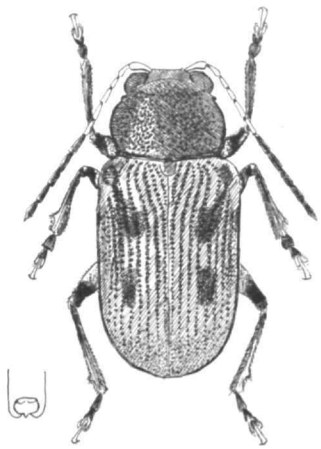


25. *M. angustulum* Crotch, Medosa, Kans.

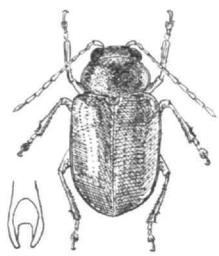
FIGURES 19–25



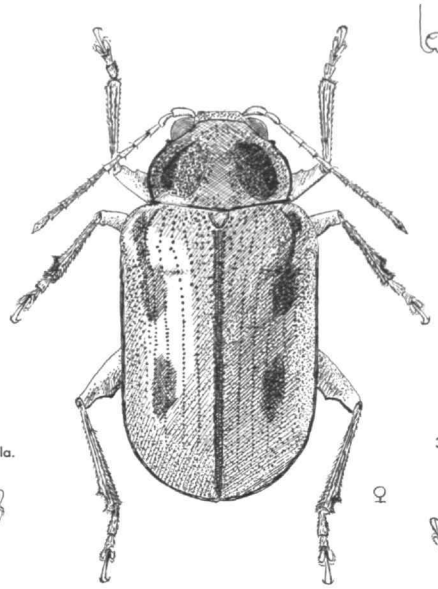
26. *Metachroma maculipennis* Schwarz, cotype.



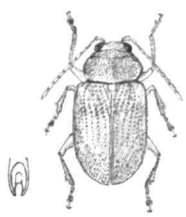
27. *M. magnipunctatum*, n. sp., type.



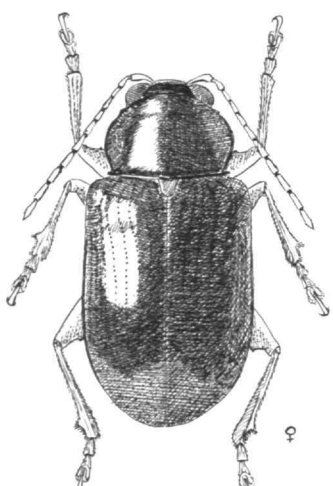
28. *M. testaceum* Blatchley, Big Pine Key, Fla.



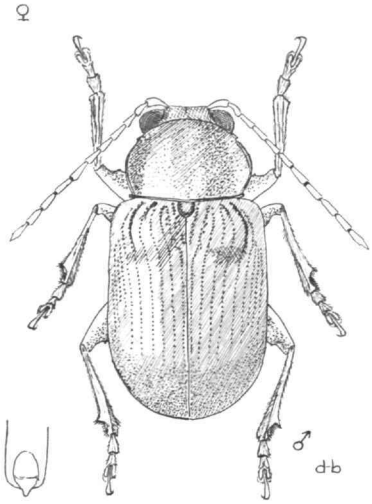
29. *M. interruptum* (Say), Kansas; in LeConte collection.



30. *M. testaceum elachistum* Blake, Cayamas, Cuba.

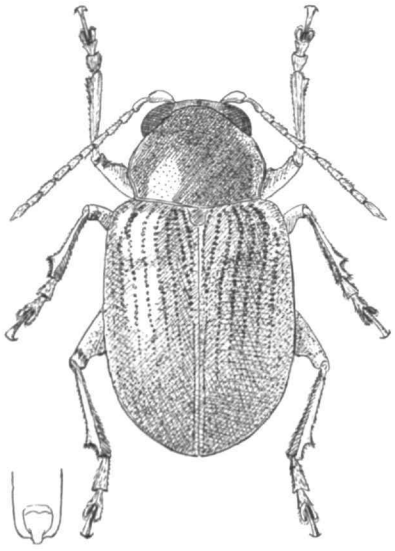


31. *M. interruptum* (Say), Thomasville, La.

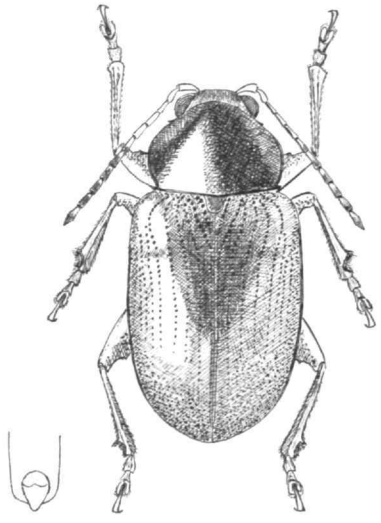


32. *M. interruptum* (Say), Shreveport, La.

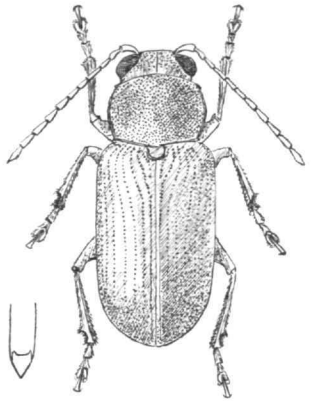
FIGURES 26–32



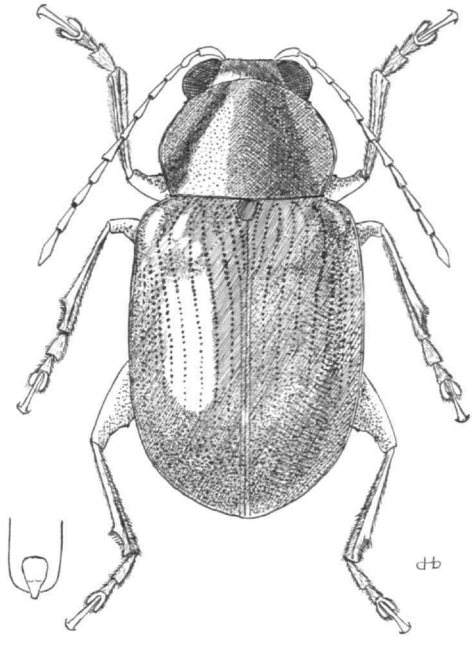
33. *Metachroma ustum* LeConte, type; aedeagus from specimen from Columbus, Tex.



34. *M. ustum* LeConte, Robstown, Tex.

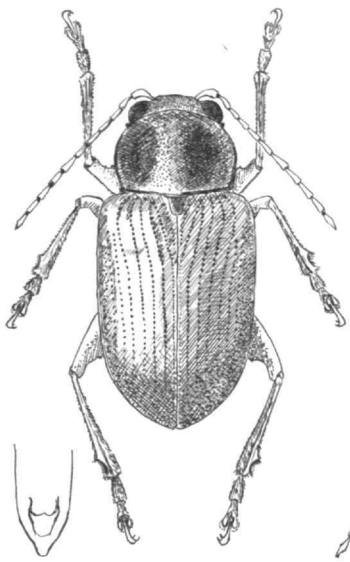


35. *M. presidiense*, n. sp., type.

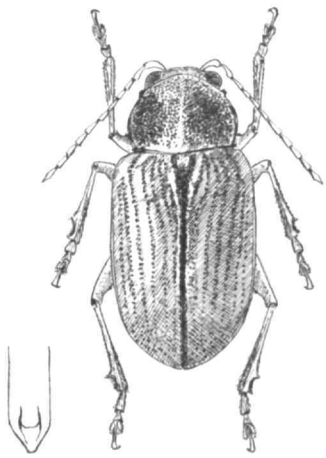


36. *M. ustum* LeConte, Hidalgo, Tex.

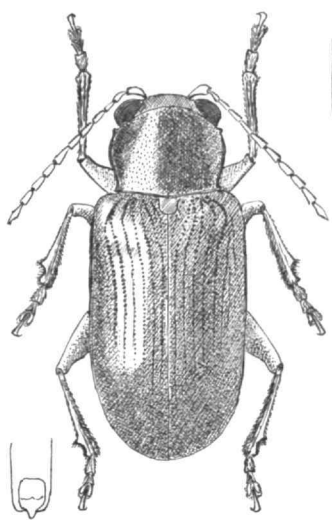
FIGURES 33–36



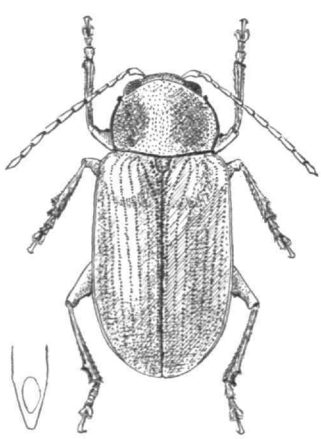
37. Metachroma *bridwelli*, n. sp., type.



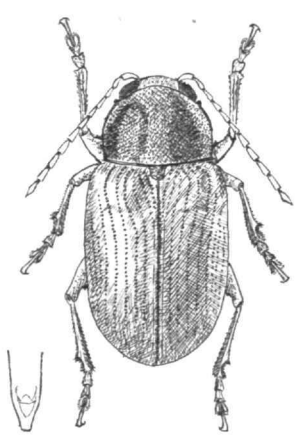
39. M. *bridwelli*, n. sp., Tempe, Ariz.



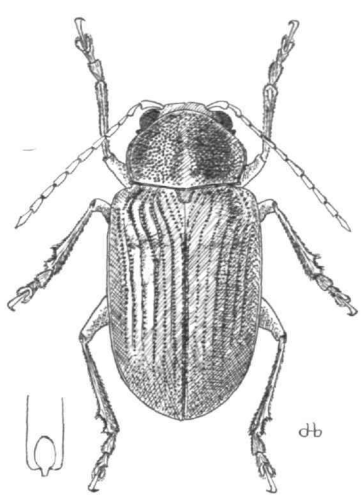
38. M. *longipennis*, n. sp., type.



40. M. *californicum* Crotch, type; aedeagus from specimen from San Ysidro, Calif.

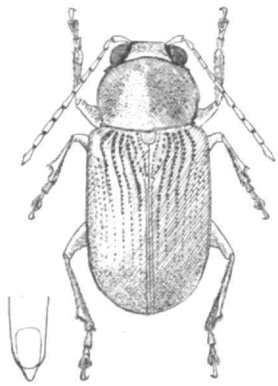


41. M. *californicum anatolicum*, n. ssp., type.

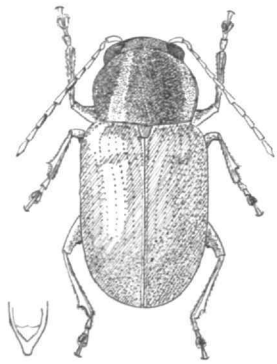


42. M. *occidentale*, n. sp., type.

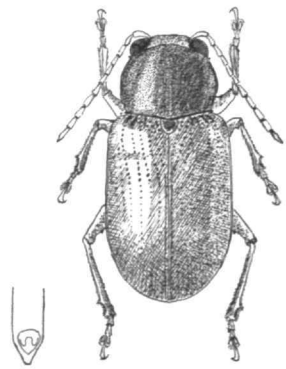
FIGURES 37–42



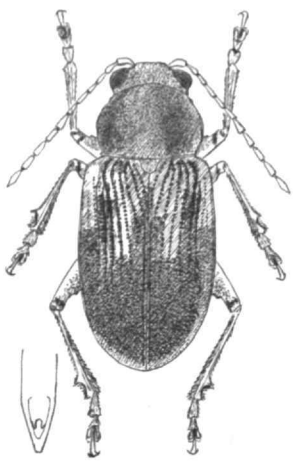
43. *Metachroma septentrionale*, n. sp., type.



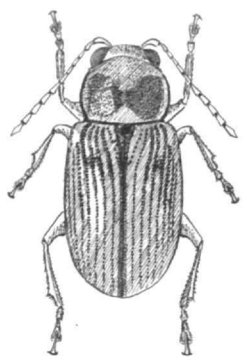
44. *M. immaculatum*, n. sp., type.



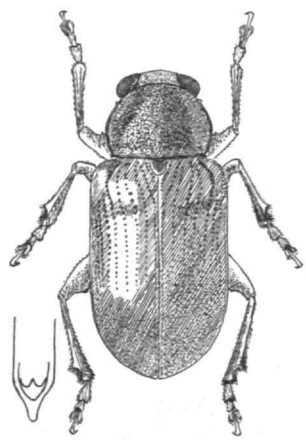
45. *M. immaculatum*, n. sp., Winslow, Ariz.



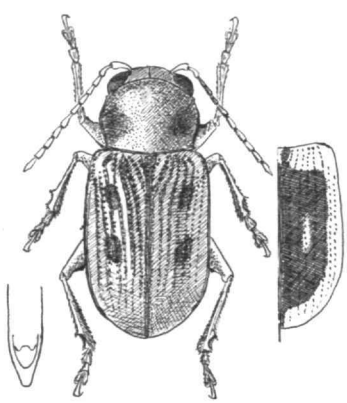
46. *M. nigrosignatum*, n. sp., type.



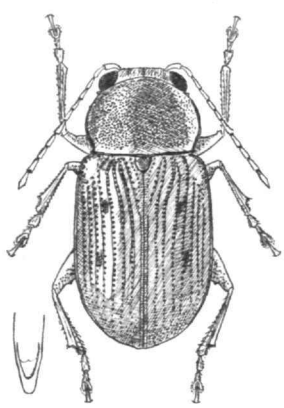
47. *M. longulum* Horn, Rock Spring, Wyo.



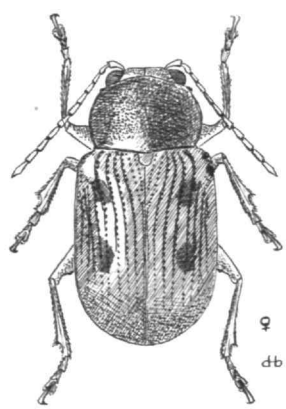
48. *M. sandersoni*, n. sp., type.



49. *M. longulum* Horn, Winslow, Ariz.

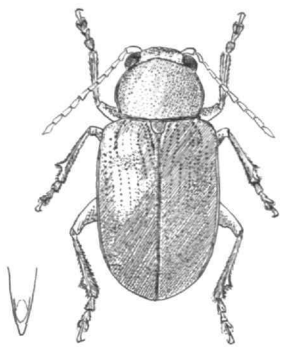


50. *M. longulum* Horn, type of *M. novemstriatum* Schaeffer.

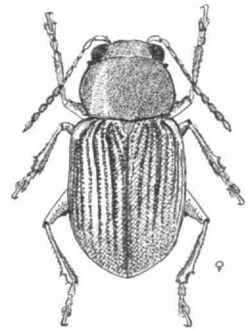


51. *M. longulum* Horn, type of *M. opacipenne* Fall.

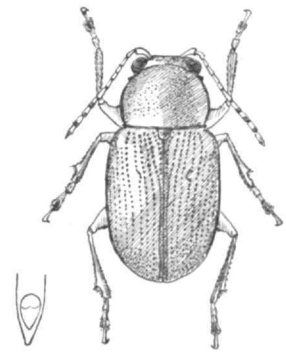
FIGURES 43–51



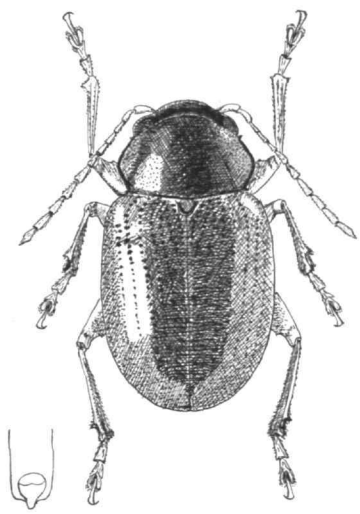
52. *Metachroma utahense*, n. sp., type.



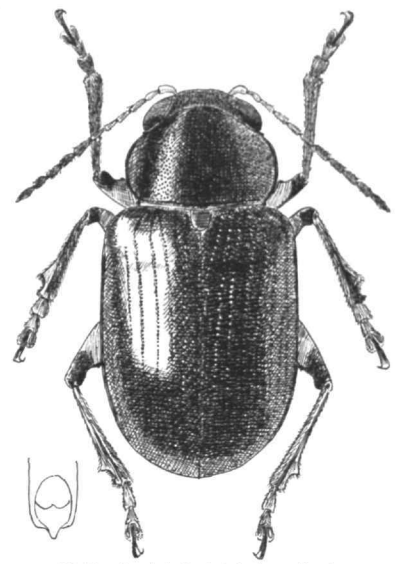
53. M. *coronadense* Fall, San Diego County, Calif.



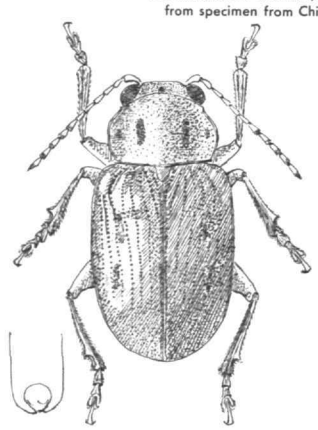
54. M. *coronadense* Fall, type.



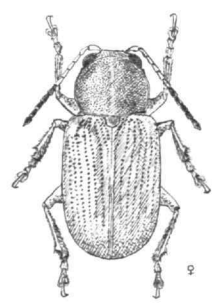
55. M. *suturale* LeConte, type; aedeagus from specimen from Chisos Mts., Tex.



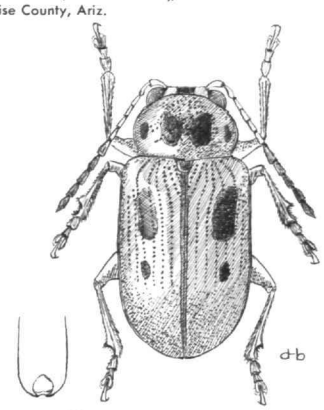
56. M. *suturale* LeConte (*aterrimum* Horn), Cochise County, Ariz.



57. M. *quadrimaculatum* Jacoby, Washington Mts., near Nogales, Ariz.

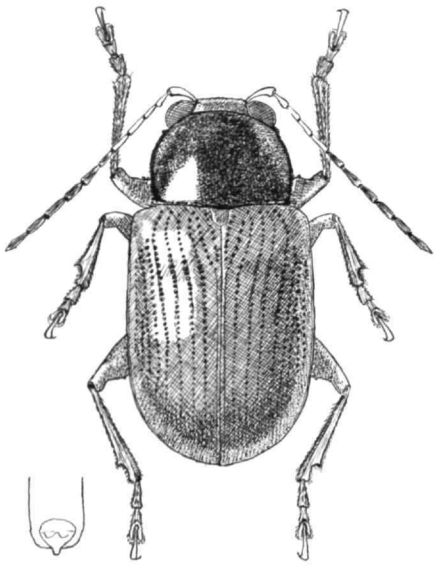


58. M. *montanense*, n. sp., type.

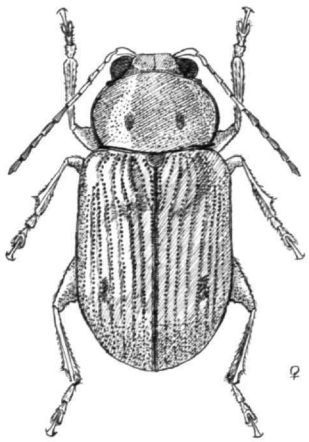


59. M. *quadrimaculatum* Jacoby, Nogales, Ariz.

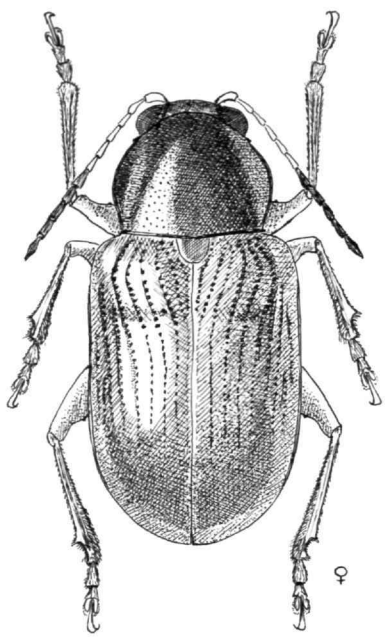
FIGURES 52–59



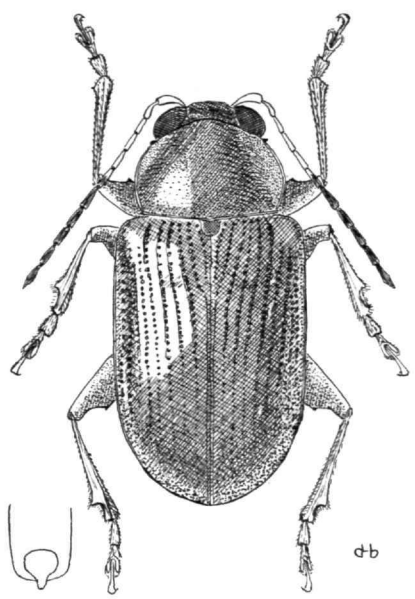
60. M. *variabile* Jacoby, Zapote, Guatemala.



61. M. *bipunctatum* Jacoby, type.

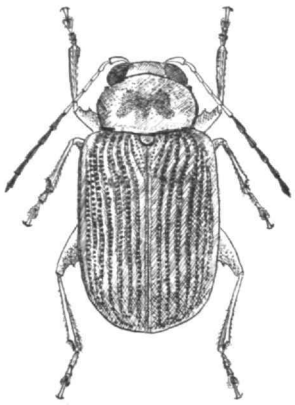


62. M. *regulare* Jacoby, Estero de Sargente, Sonora, Mexico.

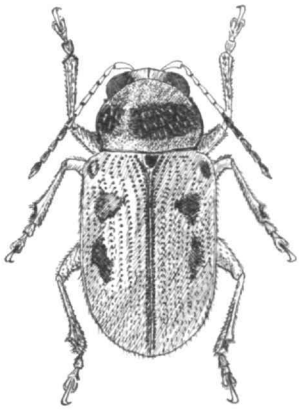


63. M. *regulare* Jacoby, cotype.

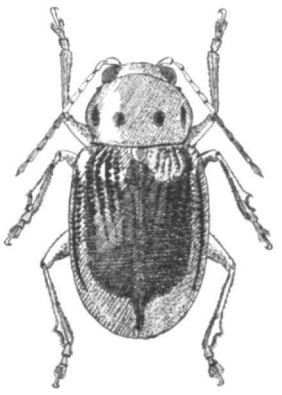
FIGURES 60–63



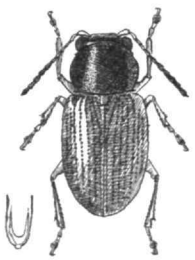
64. *Metachroma ignotum*, n. sp., type.



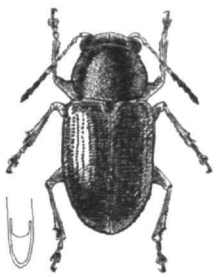
65. *M. hirsutum*, n. sp., type.



66. *M. bimarginatum*, n. sp., type.

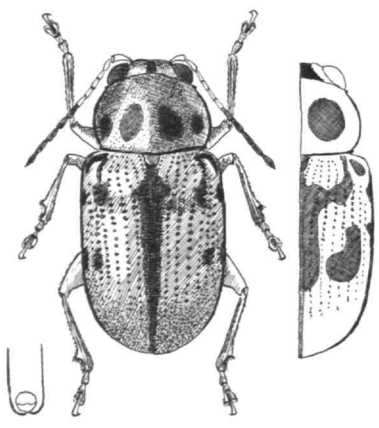


67. *M. longicollis aeneicollis* Horn.

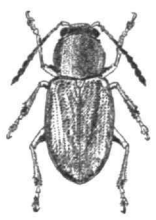


68. *M. longicollis* Jacoby, Loma Bonita, Oaxaca, Mexico.

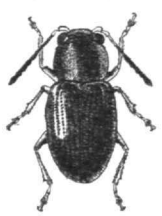
69. *M. vittipennis*, n. sp., type.



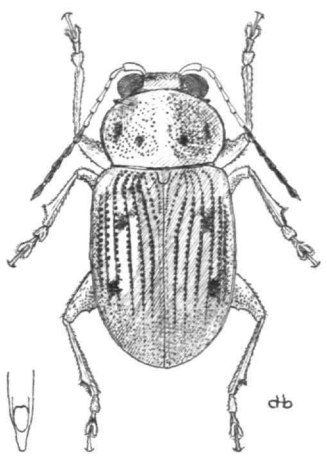
70. *M. clarkei*, n. sp., type.



71. *M. vittipennis*, n. sp., Nicaragua.

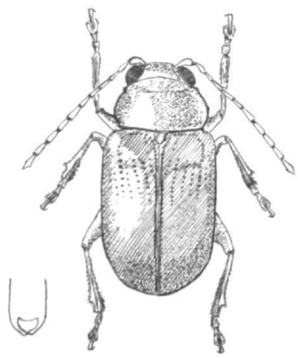


72. *M. ?vittipennis*, n. sp., San Geronimo, Guatemala.

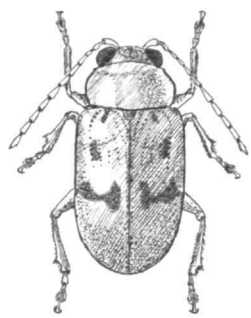


73. *M. bipunctatum* Jacoby, Mazatlan, Sinaloa, Mexico.

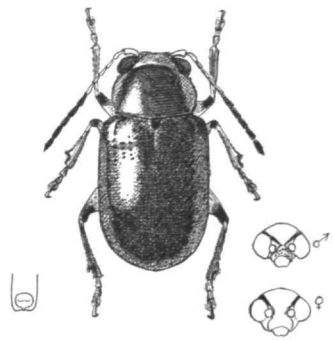
FIGURES 64–73



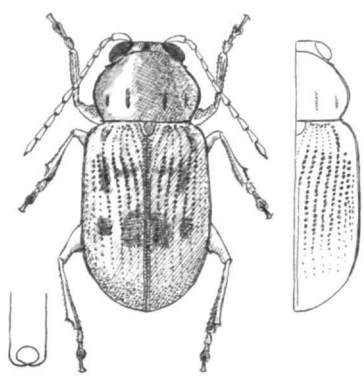
74. *Metachroma lucidum*, n. sp., type.



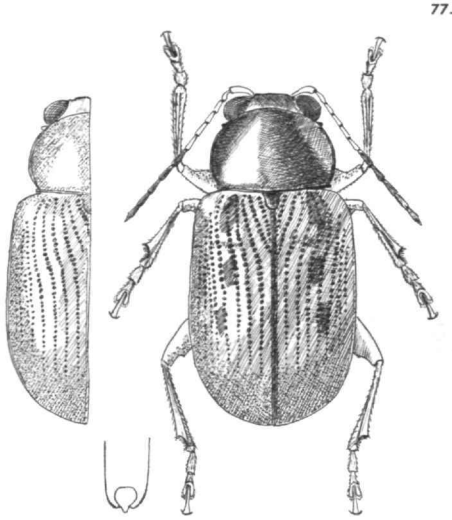
75. *M. lucidum*, n. sp.



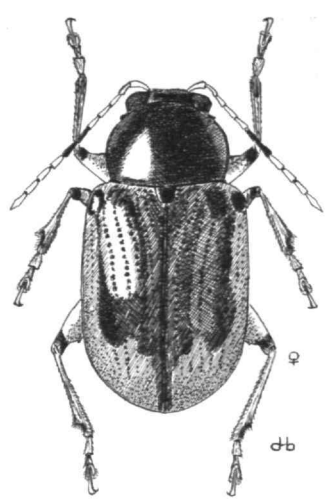
76. *M. costaricanum* Bechyne, paratype.



77. *M. panamense*, n. sp., type.

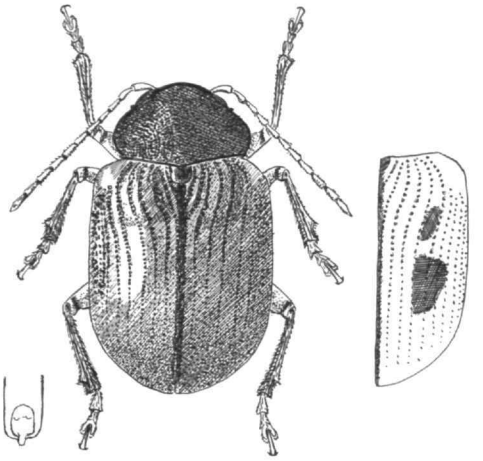


78. *M. inconstans*, n. sp., type.

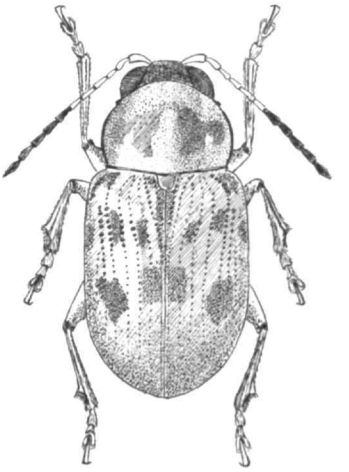


79. *M. inconstans*, n. sp.

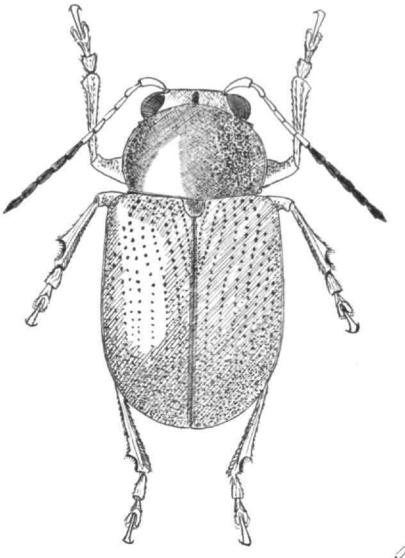
FIGURES 74–79



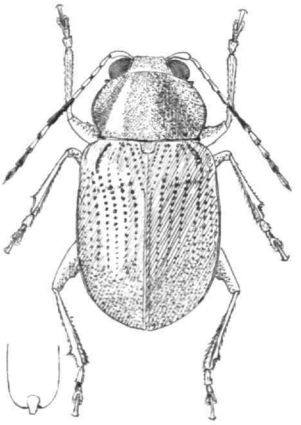
80. *Metachroma peninsulare* Crotch, type.



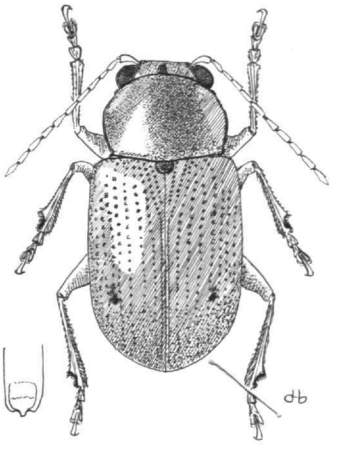
81. *M. quintanae*, n. sp., type.



82. *M. convexum* Jacoby, cotype.

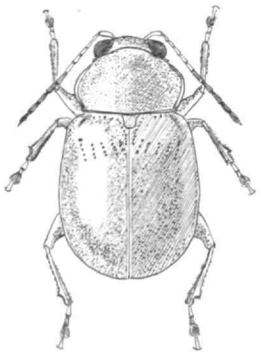


83. *M. vulgare*, n. sp., type.

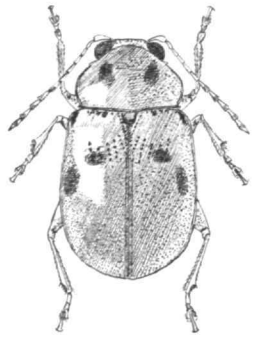


84. *M. convexum* Jacoby, Tortaguera, Costa Rica.

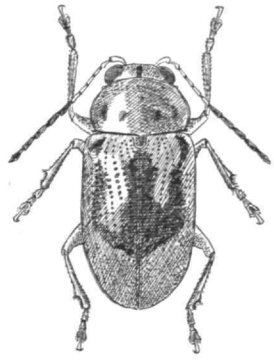
FIGURES 80–84



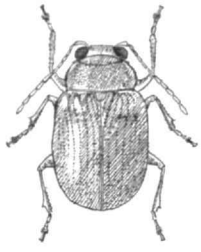
85. *Metachroma guatemalense* Jacoby, type.



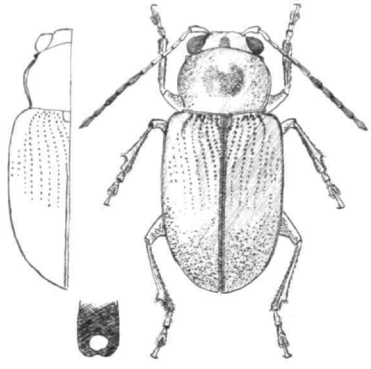
86. *M. guatemalense* Jacoby, Alta Verapaz Guatemala.



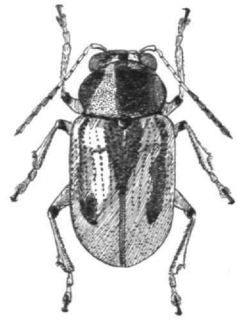
87. *M. ornatum* Jacoby, cotype.



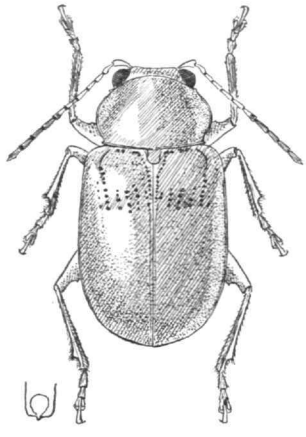
88. *M. minutum* Jacoby, type.



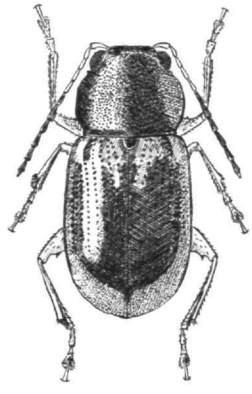
89. *M. mutabile*, n. sp., type.



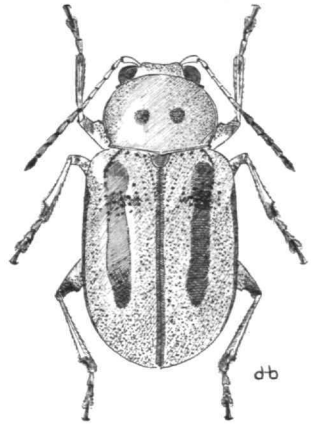
90. *M. nigricollis*, n. sp., type.



91. *M. mexicanum* Jacoby, Cuernavaca, Mexico; aedeagus from specimen from El Garvila, Guerrero, Mexico.



92. *M. insulare* Fall, type.



93. *M. mexicanum* Jacoby, Minas Nuevas, Sonora, Mexico.

FIGURES 85–93

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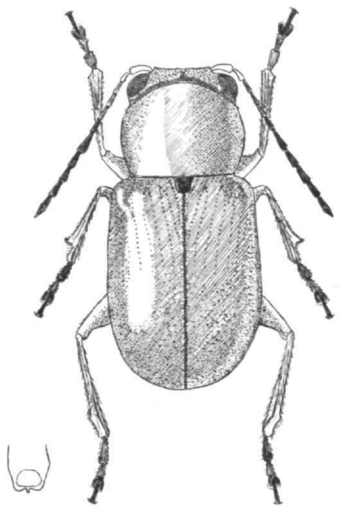
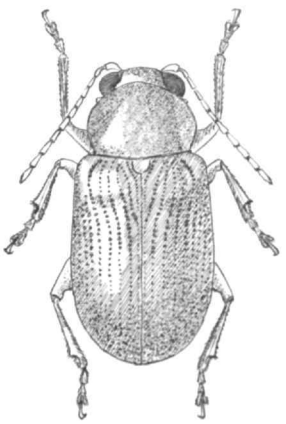
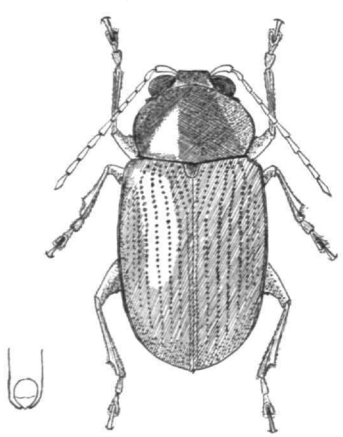


94. *Metachroma mendozae*, n. sp., type.

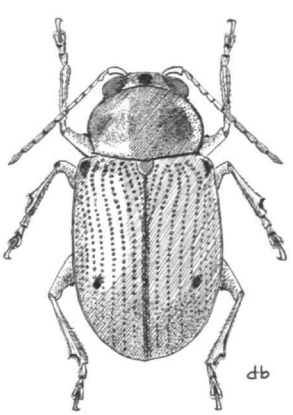


95. *M. jacobyi* Bechyne, type.

96. *M. egleri* Bechyne. (Copy of Bechyne's illustration.)

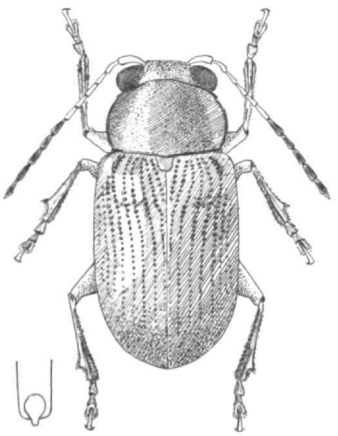


97. *M. cartagense*, n. sp., type.

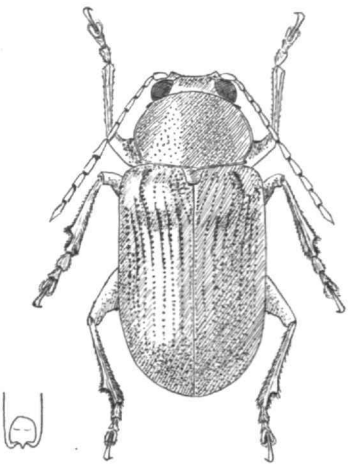


98. *M. cartagense*, n. sp., Cartagena, Colombia.

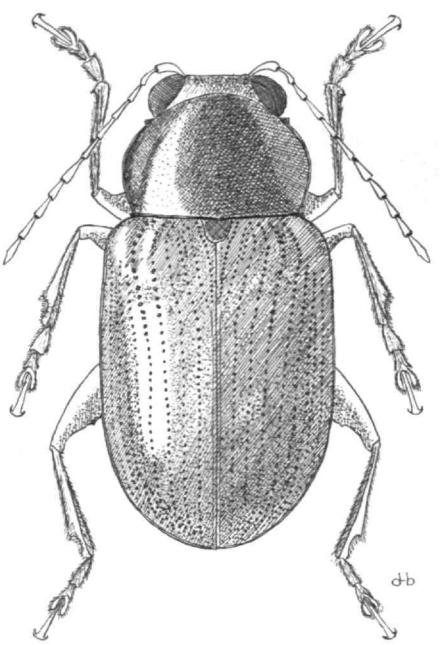
FIGURES 94–98



99. *Metachroma venezuelense* Bechyne, type.

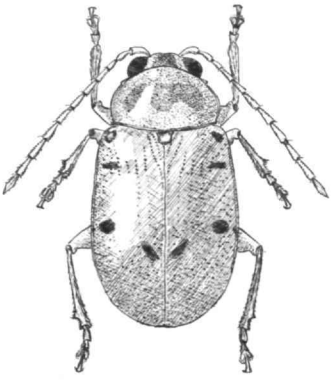


100. *M. argentinense*, n. sp., type.

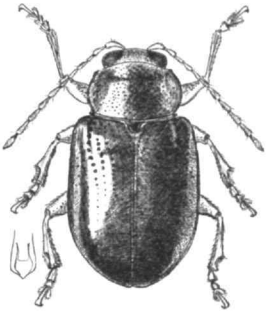


101. *M. labrale* Blair, Villamil, South Albemarle, Galapagos Islands.

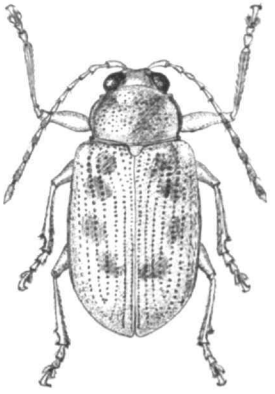
FIGURES 99–101



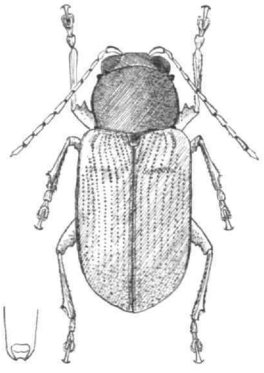
102. *Metachroma longicornis* Blake.



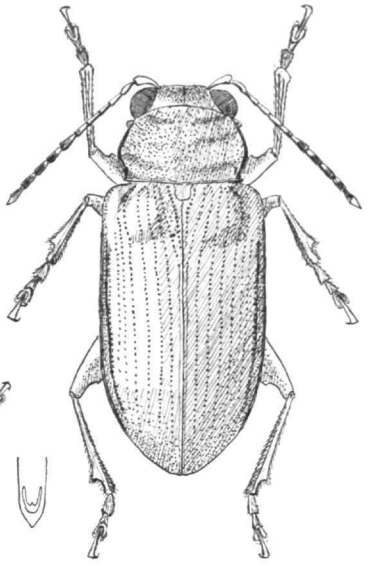
103. *M. imitans* Blake.



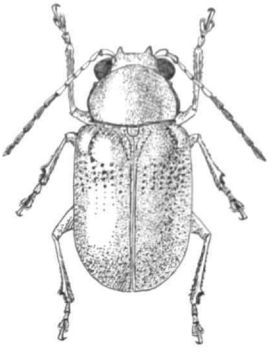
104. *M. acunai* Blake.



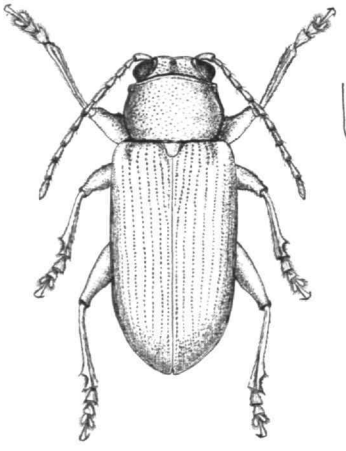
105. *M. obscuricollis*, n. sp., type.



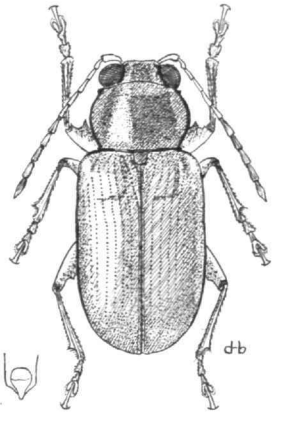
106. *M. gracile* Blake, type.



107. *M. cornutum* Blake, type.

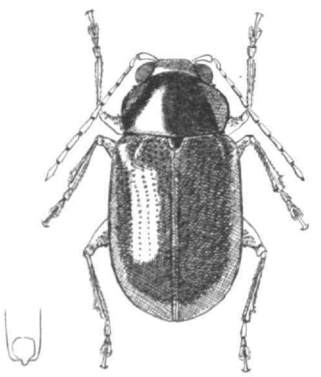


108. *M. oteroi* Blake, type.



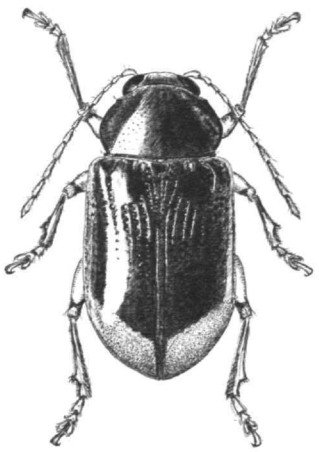
109. *M. odontotum*, n. sp., type.

FIGURES 102–109

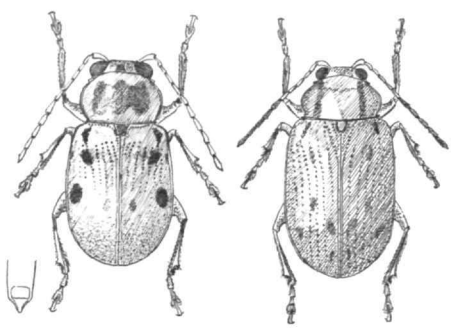


110. *Metachroma adustum* Suffrian.

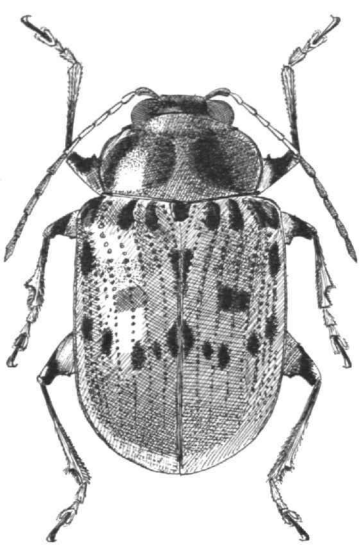
111. *M. adustum* Suffrian.



112. *M. xanthacrum* Blake, type.

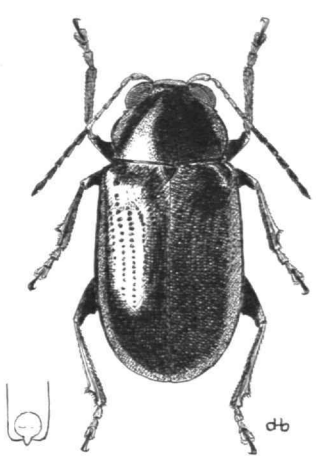


113. *M. maniocae* Blake, type. 114. *M. moaense* Blake, type.



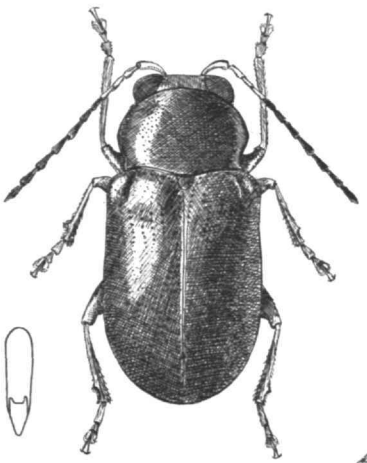
115. *M. multipunctatum* Blake, type.

116. *M. multipunctatum* Blake.



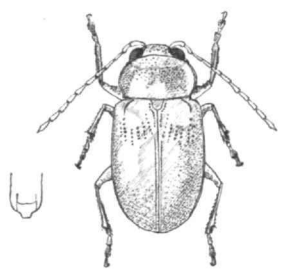
117. *M. zayasi* Blake, type.

FIGURES 110–117

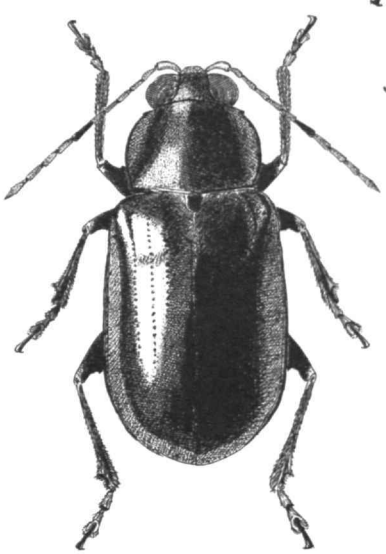


118. *Metachroma castaneum* Blake, type.

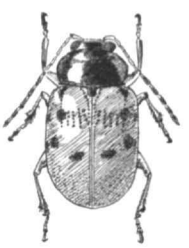
119. *M. schwarzi* Blake, type.



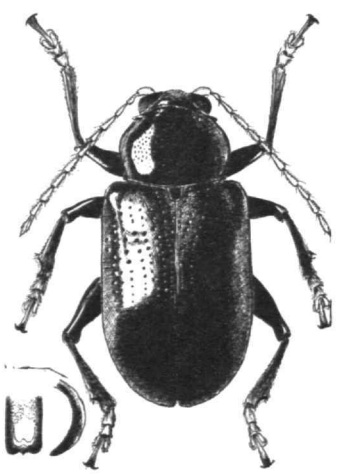
120. *M. simile*, n. sp., type.



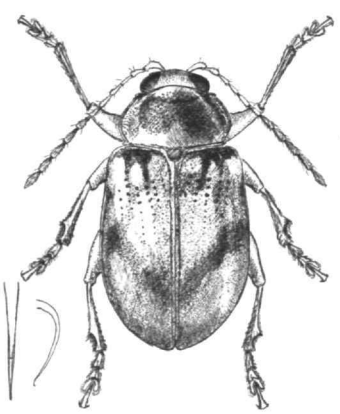
121. *M. grande* Blake, type.



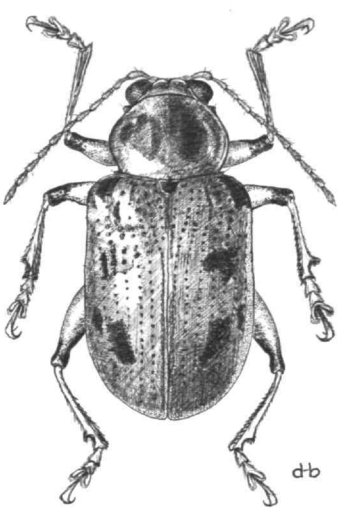
122. *M. simile*, n. sp., paratype.



123. *M. longitarsus* Blake, type.

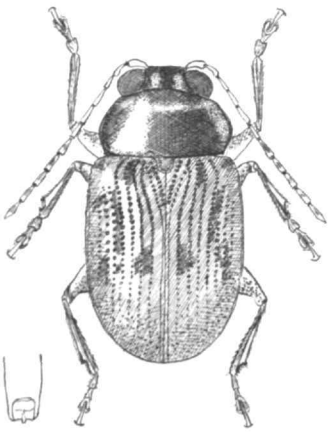


124. *M. ensiforma* Blake, type.

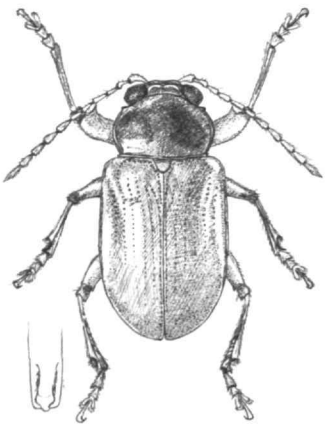


125. *M. longitarsus* Blake.

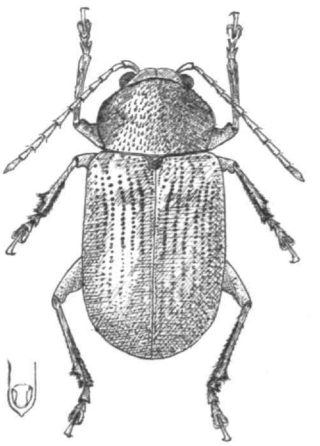
FIGURES 118–125



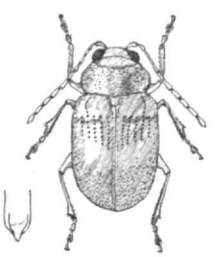
126. *Metachroma leonardi*, n. sp., type.



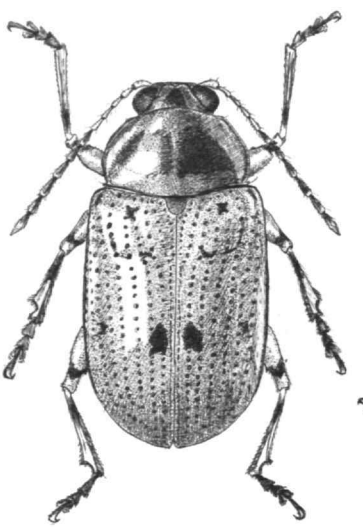
127. *M. laevius* Blake, type.



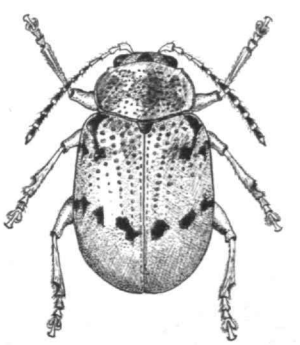
128. *M. longipunctatum* Blake, type.



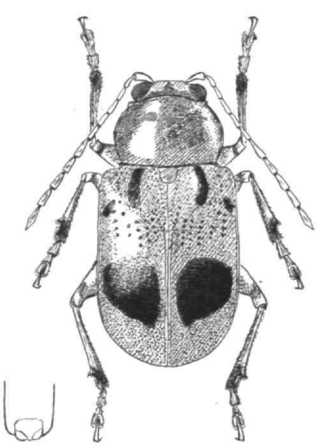
129. *M. brevistriatum* Blake.



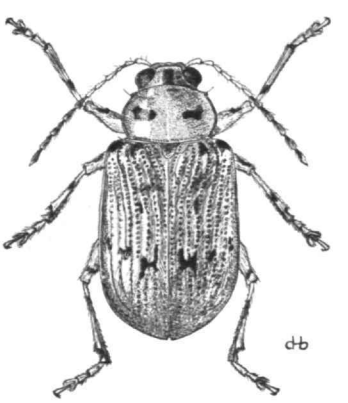
130. *M. cinctipes* Blake, type.



131. *M. obesum* Blake, type.

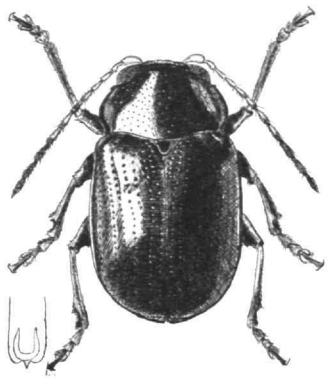


132. *M. nigromaculatum* Blake, type.

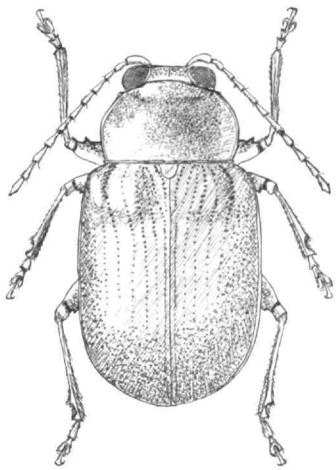


133. *M. darlingtoni* Blake, type.

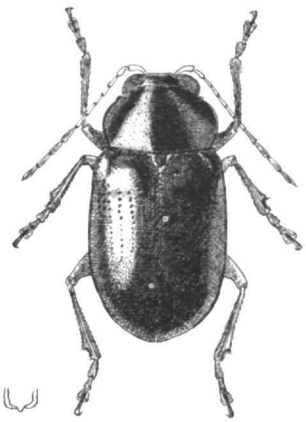
FIGURES 126–133



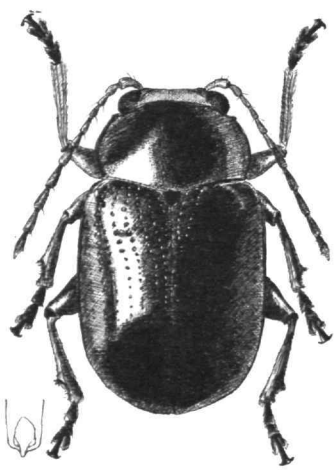
134. *Metachroma nigroviride* Blake, type.



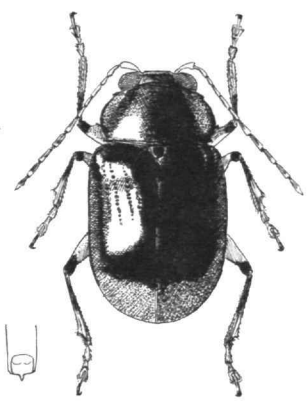
135. *M. dentatum* Blake, type.



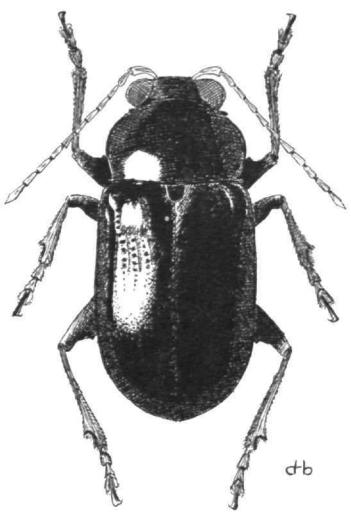
136. *M. wolcotti* Bryant, cotype.



137. *M. hottense* Blake, type.

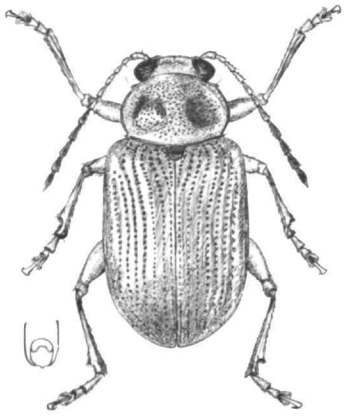


138. *M. leucurum*, n. sp., type.

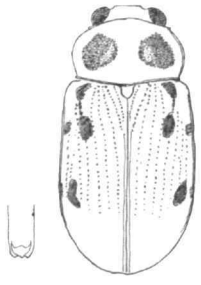


139. *M. melanochrotum*, n. sp., type.

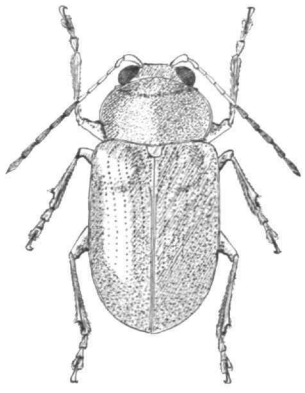
FIGURES 134–139



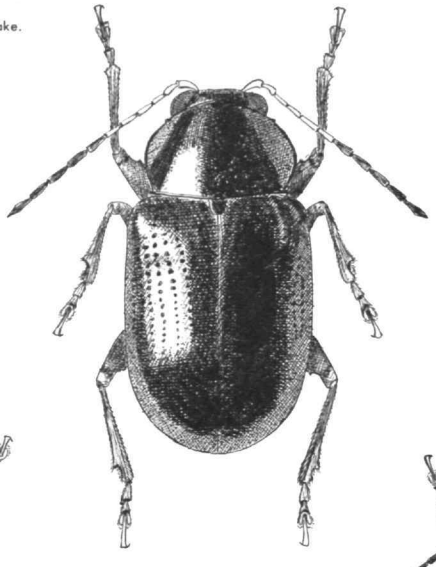
140. *Metachroma barahonense* Blake.



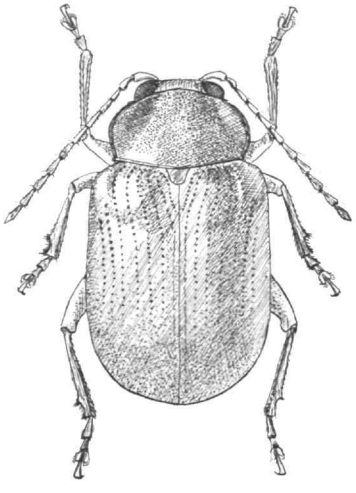
141. *M. bredeni* Blake.



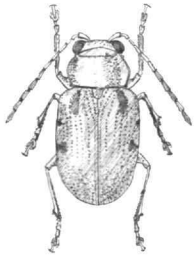
142. *M. bredeni* Blake, type.



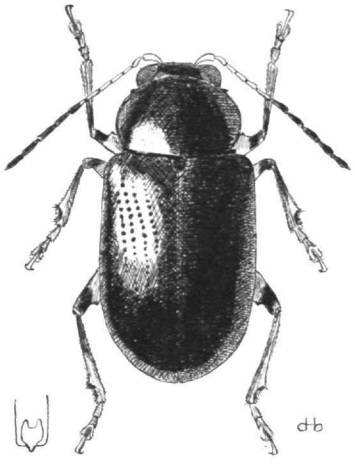
143. *M. nassauense* Blake, type.



144. *M. haydeni* Blake, type.



145. *M. gagnei* Blake, type.



146. *M. felis* Blake, type.

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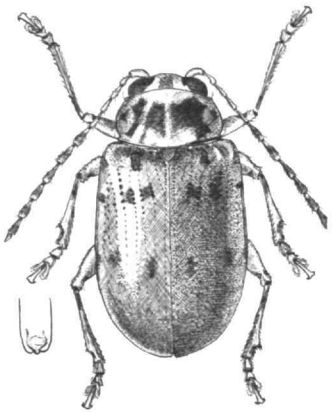
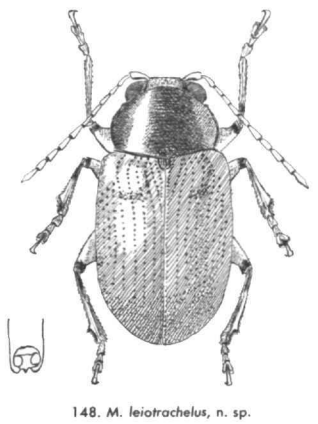
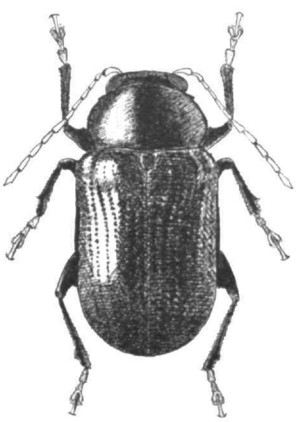


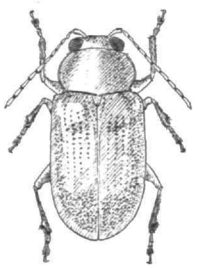
147. *Metachroma metrium* Blake.



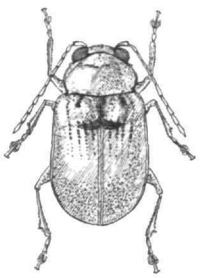
148. *M. leiotrachelus*, n. sp.



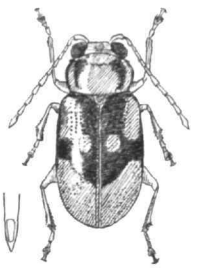
149. *M. oakleyi*, n. sp., type.



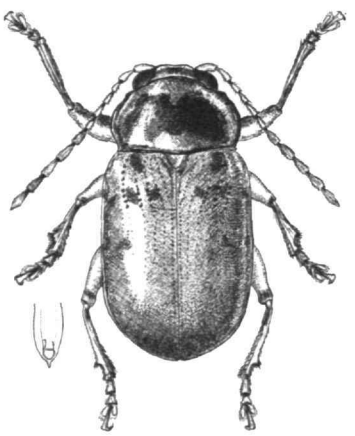
150. *M. nanum* Blake, type.



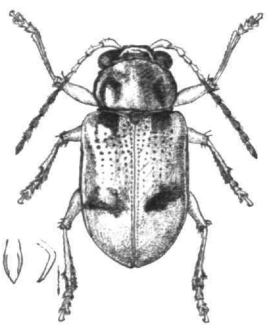
151. *M. antennale* Weise (?).



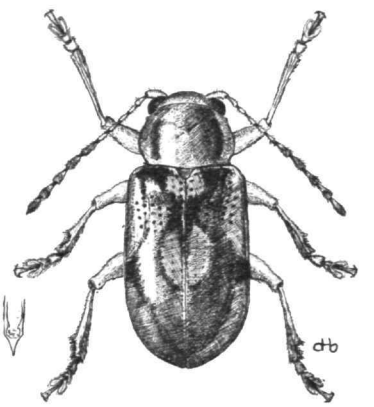
152. *M. antennale* Weise (?).



153. *M. amplicollis* Blake.



154. *M. tricharthrum* Blake.



155. *M. fenestratum* Blake.

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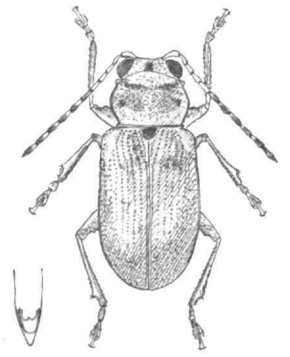
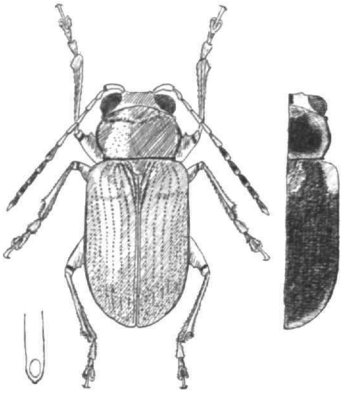
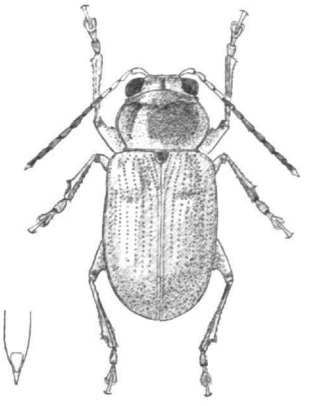


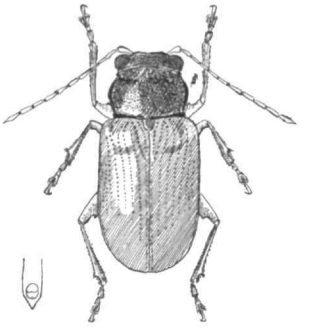
156. *Metachroma hardwarense*, n. sp., type.



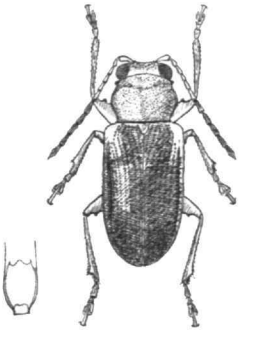
157. *M. varium*, n. sp., type.



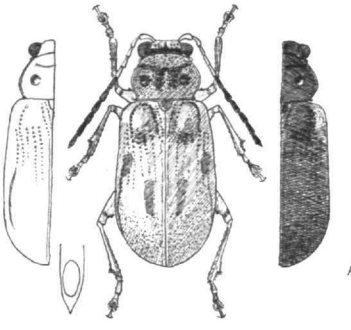
158. *M. clarum*, n. sp., type.



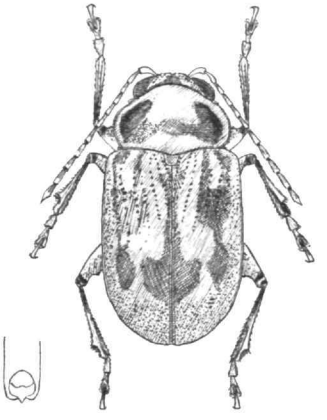
159. *M. macrum* Blake, type.



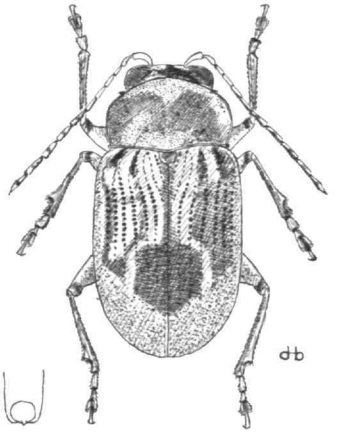
161. *M. howdenae*, n. sp., type.



160. *M. dicoelotrachelus*, n. sp., type.



162. *M. rosae* Bryant.



163. *M. rosae* Bryant.

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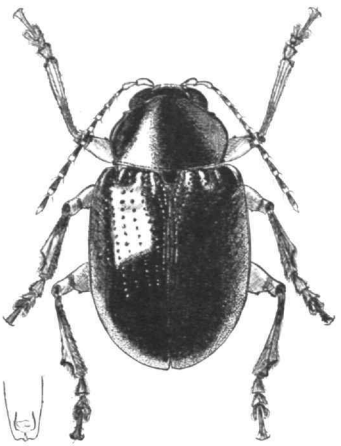
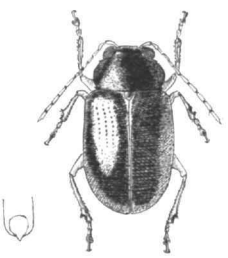
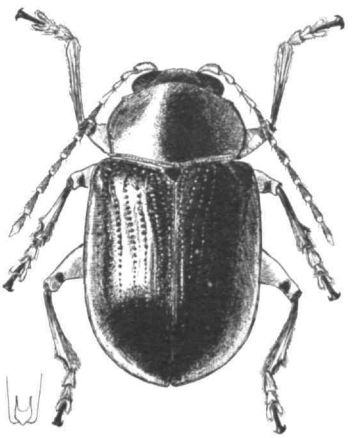


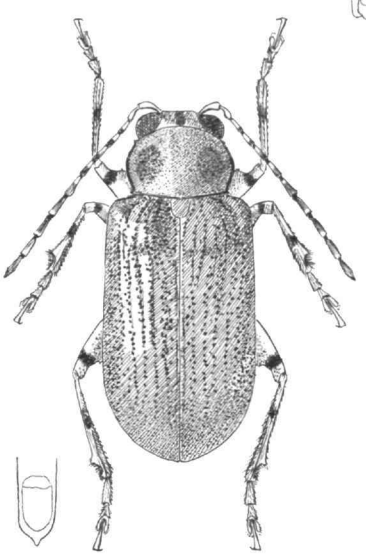
164. *Metachroma piceum* Blake, type.



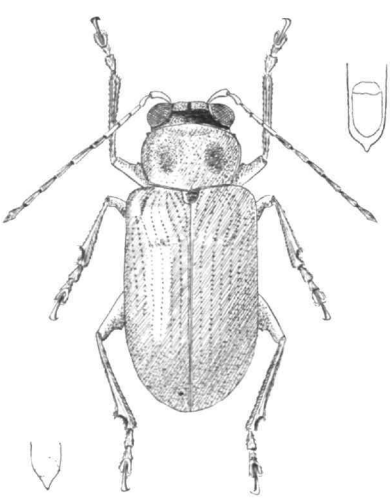
165. *M. paulum* Blake.



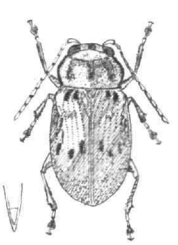
166. *M. flavolimbatum* Blake, type.



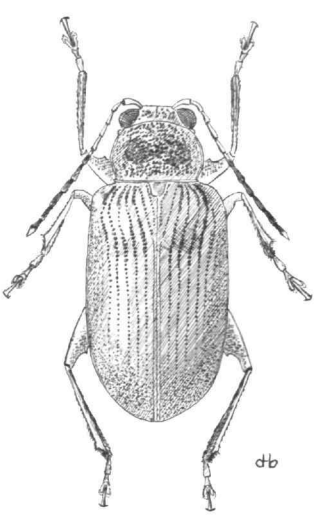
167. *M. rugosum* Blake.



168. *M. acutulum* Blake, type.



169. *M. ashtonae* Blake.



170. *M. rugicollis*, n. sp., type.

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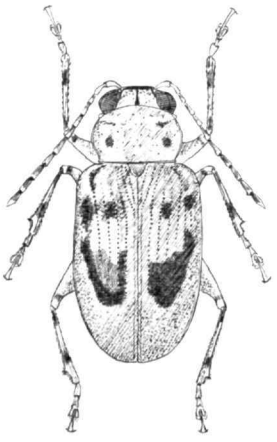
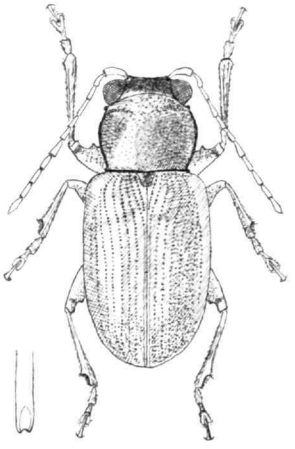
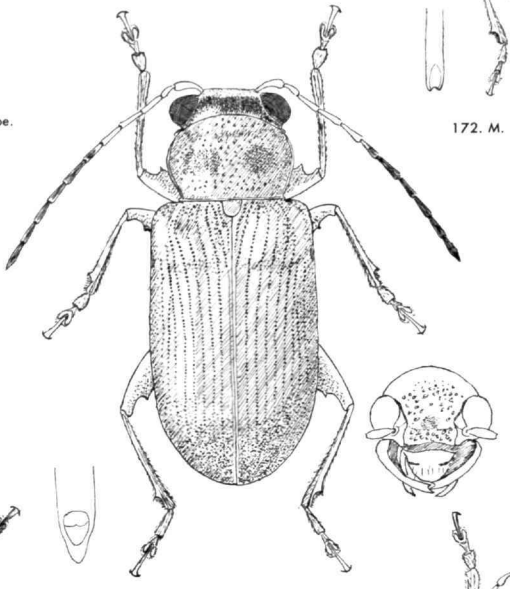


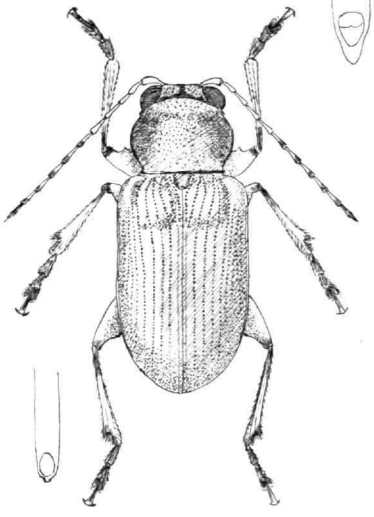
171. *Metachroma annulare*, n. sp., type.



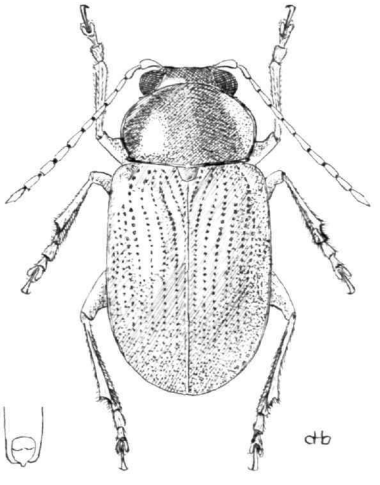
172. *M. fuscifrons*, n. sp., type.



173. *M. prognathus*, n. sp., type.



174. *M. chapini* Blake.



175. *M. farri* Blake, type.

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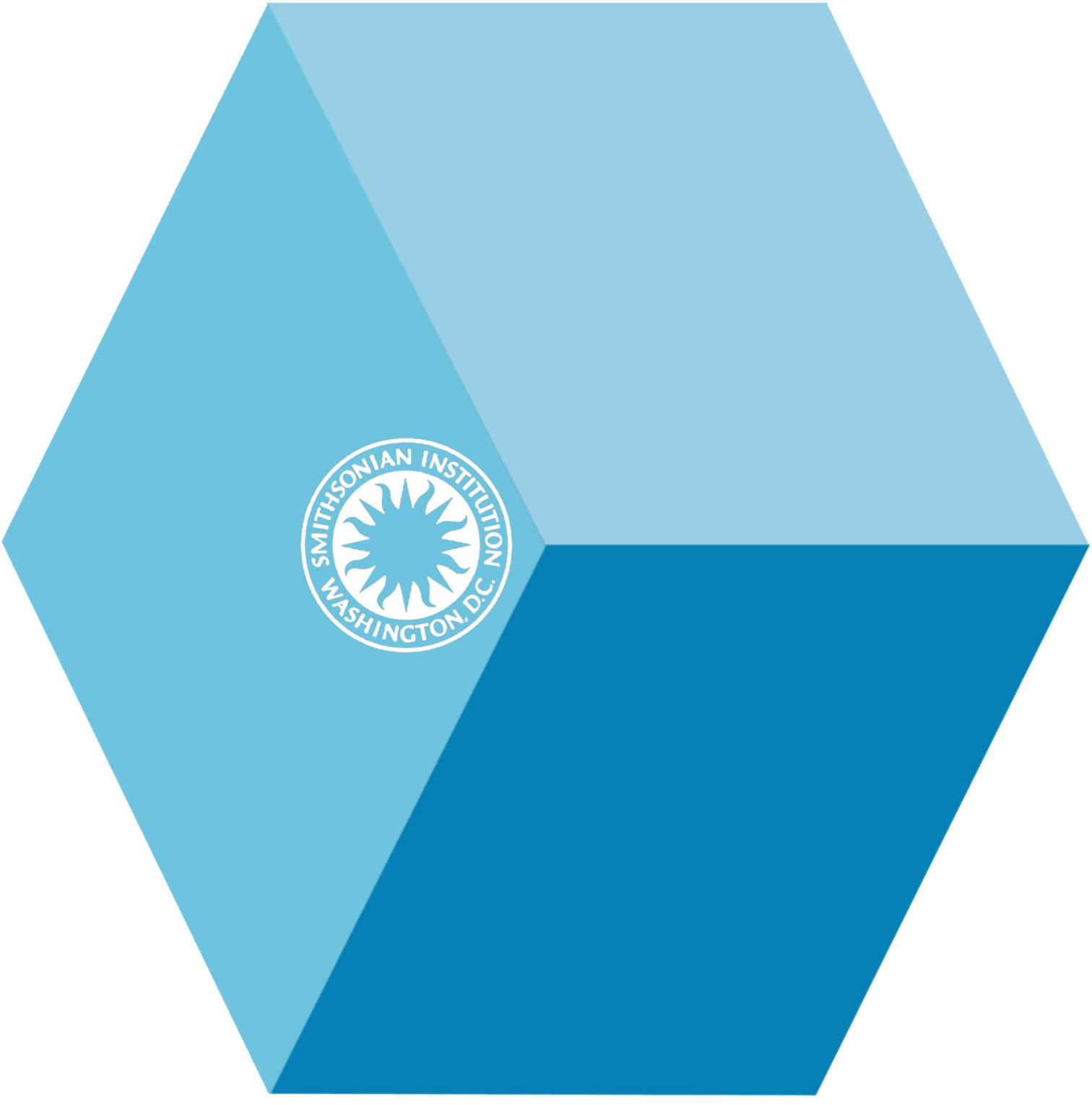
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