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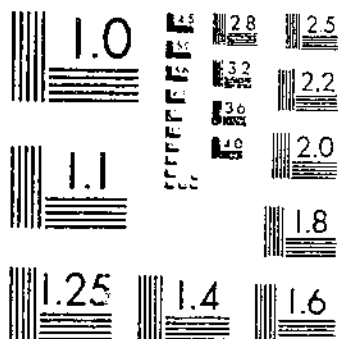
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THE BROWN SEMICOSTATE AND COSTATE SPECIES OF COLASPIS IN MEXICO

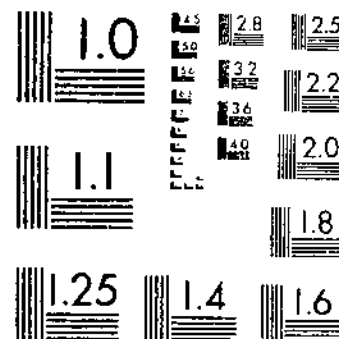
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**The Brown Semicostate and Costate Species
of *Colaspis* in Mexico and Central America
(Coleoptera: Chrysomelidae)**

Technical Bulletin No. 1534

**Agricultural Research Service
UNITED STATES DEPARTMENT OF AGRICULTURE**

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The Brown Semicostate and Costate Species of *Colaspis* in Mexico and Central America (Coleoptera: Chrysomelidae)

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The genus *Colaspis*, one of the larger groups of Eumolpinae in the New World, has been neglected since Lefèvre in Paris described many species in the 1870's and Jacoby at the British Museum (Natural History) treated it in the "Biologia Centrali-Americana" in the 1880's and 1890's. In an earlier report I tried to define the U.S. species described by Fabricius and Olivier, species that no one in this country had been able to recognize with certainty. I am now attempting to clarify the Mexican and Central American species described by Lefèvre and Jacoby. Until recently entomologists did not study genitalic characters, and they often grouped several species, particularly Jacoby's, under one name. *Colaspis* is a difficult genus to understand, but I hope to clarify the status of the species described in this bulletin.

ECONOMIC IMPORTANCE

The genus is economically important. In the United States the grape *Colaspis* is a well-known pest of corn and other crops. Another species in the Southern United States feeds on sugarcane and peanuts, and in the Western United States a species has been reported feeding in numbers on alfalfa. In Mexico and Central America several species devastate banana plantations. In fact, many species of *Colaspis* will feed on and are potentially serious pests of bananas.

In Central America the costate species occurring on bananas have generally been recognized as *Colaspis hypochlora* Lefèvre. C. C. Gowdey (1926)¹ wrote a short account of the banana scarring beetle in Colombia. George Salt (1928) published a longer account of the same infestation. He described and illustrated this beetle and its larva and related its habits and life history. Specimens

¹ The year in italic after the author's name indicates the reference in Literature Cited, p. 35.

from this infestation had been tentatively identified by H. S. Barber and E. A. Schwarz as *C. hypochlora* Lefèvre, and this identification has persisted to the present.

H. E. Ostmark (1975) described the same species from specimens collected in the same area in Colombia as *C. blakeae*. It is still a pest of bananas there. Another species infesting bananas in British Guiana also has been called *C. hypochlora*. Specimens of this species that I also sent to Nicole Berti she identified as *C. gemellata* Lefèvre when compared with the Lefèvre type.

Another species, which has recently devastated 4,500 acres of bananas in Panama, has been sent to me for identification. It is closely related to *C. fulvotestacea* Lefèvre (fig. 1) from South America, but it is one of the semicostate group I (1973) described and named after the United Brand Company's entomologist, H. E. Ostmark, who had sent me specimens. Another of these semicostate species, *C. submetallica* Jacoby, is also a banana pest there, according to Ostmark.

TAXONOMY

In addition to the yellow-brown costate species in the United States, there are also greenish or bluish noncostate species. I did not discuss these in an article on the U.S. *Colaspis* (Blake, 1974). In this bulletin I treat only the yellow-brown to dark-brown costate species and the yellow-brown, sometimes piceous species, which I call the semicostate species. (Often specimens in a series vary from brown to nearly piceous.) Males of the semicostate species usually show vestiges of costae on the sides and at the apex of the elytra, whereas the females generally have more fully developed costae. None of these semicostate species occur in the United States. A few are found in Mexico, but they appear to be most abundant in Central America. They have the same pattern of elytral punctation as the costate species and in other ways are closely related.

Among these semicostate taxa is one very distinct group of *Colaspis* that I call the *fulvotestacea* group from the species that Lefèvre (1878) described from Colombia. In this group the head has a row of depressed punctures extending from the eye to the frontal tubercles, and the elytra have a transverse depression below the basal umbone. Not including *C. fulvotestacea*, which is a South American species, I discuss 10 species of this group here. Three species of this group have been described (Blake, 1973) to provide a name for that particular species that is devastating bananas in Panama. Apparently many undescribed species belong in this group.

In addition to the *fulvotestacea* group, I am describing 10 miscellaneous species, 3 of which form a group with *C. plicatula* Jacoby. Other species, such as *C. inconspicua* Jacoby, have close relatives in South America, such as *C. insidiosa* Lefèvre and *C. interstitialis* Lefèvre. Undoubtedly many more undescribed species are in both the semicostate and costate groups, but lacking representative series of specimens containing both males and females, I am loathe to describe them at present.

As in the U.S. species of *Colaspis*, those in Mexico and Central America vary greatly in color, which has complicated their identification. I have named one species *C. variabilis*, and I note that Lefèvre named an Argentinian species *C. varia*. Three males of *variabilis* vary widely in color—one is pale reddish brown, the second is almost piceous, and the third is lustrous metallic over the entire upper surface. They were collected from the same locality and all have similar aedeagi. Specimens of *C. submetallica* Jacoby may be entirely reddish brown, whereas most of them have an overall metallic green sheen, which is common to many species and is usually variable in extent. Generally the margins of the prothorax and elytra and epipleura are green, often the prosternum and mesosternum have a green glitter, and even the elytral punctures may have a green glitter. Lefèvre's *C. hypochlora* is an example of the wide variability in color. Although Lefèvre's name "*hypochlora*" means "green below," the type specimen of *C. hypochlora* from Colon, Panama, has a brown abdomen. Another of Lefèvre's specimens of *hypochlora* from Mexico has a green abdomen.

Only one set of characters, the aedeagus, can be fully depended on to separate the species. Other useful characters are the color of the antennal segments, some of which are usually dark, and the elytral costae. In some specimens the two costae near the suture are wider, as in *C. hypochlora*, whereas in others the costae are equal in width. The dark metallic green, black, or pale brown of the undersurface may sometimes be a valuable character. In a few species the hind tibiae of the male may be dilated medially or apically.

KEY TO SPECIES

- | | |
|--|----|
| 1. Yellow brown to deep reddish brown, sometimes nearly piceous, semicostate (figs. 1-23) | 2 |
| Yellow brown to deep reddish brown, costate (figs. 24-40) | 22 |
| 2. Head with depressed line of punctures on front from eye to frontal tubercles (figs. 1-12) | 3 |
| Head without depressed line of punctures on front | 13 |

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3.	Yellow brown	4
	Deep reddish brown	6
4.	Legs dark at union of femora and tibiae	<i>homoia</i> , n. sp.
	Legs uniformly colored	5
5.	5.5-8 mm long, yellow brown, usually with deeper brown prothorax	<i>ostmarki</i> Blake
	4.5-6 mm long, pale yellow brown	<i>cacaoi</i> Blake
6.	Legs dark at union of femora and tibiae	7
	Legs not dark at union of femora and tibiae	11
7.	Wide dark band before middle of elytra	<i>belti</i> Jacoby
	No such wide dark band	8
8.	Usually, but not always, with metallic green luster over brown	<i>submetallica</i> Jacoby
	Without metallic luster	9
9.	Aedeagus with broad rounded tip (fig. 4)	<i>submetallica</i> Jacoby
	Aedeagus with narrow tip	10
10.	Prothorax broad, nearly twice as wide as long	<i>spadic</i> , n. sp.
	Prothorax not nearly twice as wide as long	<i>leiosomata</i> Blake
11.	Edge of elytra along base dark, this dark area extending below scutellum a short distance along suture	<i>atrisuturalis</i> , n. sp.
	Dark edge along base and suture absent	12
12.	Prothorax with narrow metallic green margin	<i>grandicollis</i> , n. sp.
	Prothorax without narrow green margin	<i>fulva</i> , n. sp.
13.	Elytra three times as long as prothorax	14
	Elytra less than three times as long as prothorax	18
14.	Pale yellow brown dorsally, with very fine and densely punctate prothorax, male without costae, female with rather flat but distinct costae in apical half	<i>levicostata</i> , n. sp.
	Deep yellow or reddish brown to piceous	15
15.	Dorsally almost piceous, deep brown ventrally, prosternum and mesosternum with metallic luster, legs dark brown	<i>panamensis</i> , n. sp.
	Deep yellow brown to dark reddish brown	16
16.	Deep yellow brown, elytra nearly four times as long as prothorax	<i>longipennis</i> , n. sp.
	Reddish brown	17
17.	Elytra nearly four times as long as prothorax, entirely without aeneous luster, margin of prothorax deeply undulate	<i>macroptera</i> , n. sp.
	Elytra little more than three times as long as prothorax, margin of prothorax nearly rounded, with little sign of undulation and with aeneous luster	<i>plicatula</i> Jacoby
18.	Middle tibiae bowed	<i>uncotibialis</i> , n. sp.
	Middle tibiae not bowed	19
19.	Deep brown to almost piceous, overspread with faint metallic luster, particularly in punctures; pronotum and mesosternum green	<i>consanguinea</i> , n. sp.
	Pale reddish brown to dark brown or piceous with brownish or greenish tinge	20

20. Varying from pale reddish brown to dark brown and piceous, with brown or greenish tinge on head and prothorax . . . *variabilis*, n. sp.
Deep brown or piceous, with or without aeneous tinge 21
21. Hind tibiae of male enlarged at middle, dark brown to piceous . . . *inconspicua* Jacoby
Hind tibiae of male not enlarged; female elytra (according to Jacoby) with metallic green luster and with longitudinal costae . . . *subcostata* Jacoby
22. 7-8.5 mm long 23
4-6.5 mm long 25
23. Hind tibiae of male without enlargement on underside . . . *championi* Jacoby
Hind tibiae of male with enlargement on underside 24
24. Hind tibiae of male enlarged at middle *similaris*, n. sp.
Hind tibiae of male enlarged in apical third *confusa* Bowditch
25. Elytra with dark metallic sutural stripe *suturalis* Lefèvre
Elytra without sutural stripe 26
26. Entirely without metallic luster 27
With more or less metallic luster 29
27. Only apical segment of antenna dark *hesperia* Blake
More than apical antennal segment dark 28
28. Small, 4 mm long *viridiceps australis*, n. ssp.
Large, 5-6.5 mm long *kirra*, n. sp.
29. Margin of elytra only metallic green, rarely faintly green in middle of prosternum and mesosternum *xanthophaia*, n. sp.
Body beneath more or less green 30
30. Face dark, either green or black 31
Entire head pale 32
31. Head lustrous green; elytral costae flat *viridiceps* Schaeffer
Head either black or lustrous green; elytral costae well developed . . . *chloropsis*, n. sp.
32. Most of ventral body lustrous green 33
Abdomen usually brown, remainder of ventral surface more or less green 36
33. Aedeagus when viewed from above with sharp points anterior to tip *freyi* Bechyne
Aedeagus lacking sharp points anterior to tip 34
34. Costae very narrow and inconspicuous *stenorachis*, n. sp.
Costae not conspicuously narrow 35
35. First two costae near suture wider than remainder . . . *hypochlora* Lefèvre
First two costae near suture not conspicuously wider than remainder . . . *chapelensis*, n. sp.
36. Costae of same width up and down, with regular rows of geminate punctures between, single near suture *hypochlora* Lefèvre
Costae irregular in width up and down, with punctures between irregular, sometimes in single rows, often alternate, rarely geminate *blakeae* Ostmark

DESCRIPTIONS OF SPECIES

Colaspis homoia, new species

(Figs. 2 and 3)

Length 6.7 mm, width 3.5 mm.

Elongate oblong oval, shining pale reddish brown; prothorax not quite twice as wide as long, with sinuate sides, surface rather finely punctate; elytra almost three times as long as prothorax and densely punctate, punctures in double rows with intervals between somewhat costate in female.

Head with interocular space half width of head, occiput and front finely punctate, a row of depressed punctures from eye to frontal tubercles, clypeus well defined and with punctures, labrum with small emargination anteriorly. Antennae pale yellow brown with seventh and apical joint dark. Prothorax not quite twice as wide as long with sinuate sides, shining reddish brown with fine punctures. Scutellum reddish brown. Elytra almost three times as long as prothorax and a little wider with transverse depression below base, densely and moderately coarsely punctate; punctures in rows, next to suture in single line, in second row single in apical half, in other rows either alternating or in geminate rows being coarser in and about basal depression and single again near margin, intervals between punctures distinctly costate but not much elevated in female. Body beneath and legs entirely pale reddish brown except at apex of femora, which are slightly deeper in color.

Type.—Female, USNM.² Type No. 72991. One female paratype, British Museum (Natural History).

Type locality.—Teapa, Tabasco, Mexico, H. H. Smith collector, in April.

Remarks.—I have seen but two specimens. One is in the Jacoby Biologia material in the British Museum (Natural History) and the other is in the Monros collection in the U.S. National Museum. Jacoby in his supplement (1890) placed the former specimen under *C. fulvotestacea* Lefèvre. He did note, however, that the head was finely punctate near the eyes and the thorax had one or two teeth at the sides in contrast to Lefèvre's description of the head being smooth and the thorax sinuate or dentate at the middle. Also, the elytra of *homoia* are much more coarsely punctate than those of the type of *fulvotestacea* and, in the female at least, have quite evident costae. In addition, this species differs from *fulvotestacea*

² U.S. National Museum, Washington, D.C.

in being paler reddish brown and antennal segments 7 and 11 are entirely dark; in *fulvotestacea* the segments are entirely pale.

A male specimen from Guatemala, taken in bananas at Mobile, Ala., is in the U.S. National Museum collection and may be this species, but I cannot be certain. The aedeagus is similar to that of *C. ostmarki* Blake but with a broader tip.

Colaspis submetallica Jacoby

(Fig. 4)

Colaspis submetallica Jacoby, 1881, p. 140.

Length 5-7 mm, width 2.4-3.5 mm.

Elongate oblong oval, shining, with metallic green luster over reddish brown or entirely reddish brown (without any green luster); margin with green luster and with dark apex to femora; prothorax densely punctate; elytra with geminate punctation becoming single near apex, with little trace of costae.

Head with interocular space approximately half width of head, rather sparsely punctate on upper front, more coarsely and densely punctate on clypeus which is well defined, a row of depressed punctures from eye to tubercles. Antennae rather short, pale except seventh joint. Prothorax convex, finely punctate, shining metallic green over reddish brown, margin undulate, almost toothed. Scutellum brown. Elytra somewhat wider than prothorax and not three times as long, a slight basal depression below basal umbone; punctation in single line in most of first two lines near suture, geminate in others becoming single near apex, little trace of costae. Body beneath brown, sometimes with faint metallic luster on prosternum, legs reddish brown with deeper brown at juncture of femora and tibiae.

Type.—In British Museum (Natural History).

Type locality.—Guatemala, Champion.

Other localities.—Guatemala: Cayuga, Wm. Schaus; Alta Vera Pas, Schwarz and Barber, on cacao. Costa Rica: Las Loras near Puntarenas, F. Knab; San Carlo, Schild and Burgdoff. Panama: Trinidad River, August Busck; Paraiso, E. A. Schwarz; Waldeck, C. H. Ballou, on cacao; Porto Bello, A. Busck; Cabima, A. Busck; Gatun, A. H. Jennings; Tabernella, A. Busck; Barro Colorado Island, J. Zetek; Corazol, A. Busck; Cano Saddle, Gatun Lake, R. C. Shannon; Bohio, A. Busck.

Remarks.—The size and coloration vary considerably. Most of the specimens are reddish brown with a light green luster, but some lack the green luster. The aedeagi show no differences.

Jacoby described the form lacking the luster as a "variety." His series was collected in numbers in Chiriqui together with the typical form. A series of five of these reddish-brown ones from Porto Bello, Panama, collected by Busck are in the U.S. National Museum. This species belongs to the *fulvotestacea* group. It has the characteristic depressed line of punctures on the head near the eye to the frontal tubercles and the transverse depression on the elytra. It is found in numbers on bananas.

Colaspis cacaoi Blake

(Fig. 5)

Colaspis cacaoi Blake, 1973, pp. 87, 88.

Length 4.5–6 mm, width 2.4–3 mm.

Elongate oval, shining reddish brown, with jaws, seventh, and usually last antennal joints dark; head nearly impunctate except on clypeus; prothorax finely punctate and with undulate margin; elytra with pronounced depression below basal umbone, feebly costate on sides, punctation in basal half more or less alternately geminate, toward apex in single rows.

Head with interocular space half width of head, occiput and front shining, smooth, often impunctate, except for line of depressed punctures from eye to tubercles, clypeus with coarse punctures, anterior margin of clypeus nearly straight over labrum, jaws large and dark. Antennae long and slender, with seventh and usually apical joint dark. Prothorax not twice as wide as long with undulate margin, surface shining, finely punctate. Scutellum pale brown. Elytra more than twice but not three times as long as prothorax and wider, with pronounced transverse depression below basal umbone; lines of punctures irregularly alternate in basal half becoming more or less single on sides and at apex, somewhat costate, more so in females. Body beneath entirely pale yellow brown.

Type.—Male and 13 paratypes, USNM Type No. 72431.

Type locality.—Waldeck, Costa Rica, collected by S. and C. H. Ballou, July 21, 1936, and Feb. 13, 1934, on *Theobroma cacao*.

Remarks.—This is smaller than *homoia* or *submetallica* and is paler. It is yellow brown without any trace of darker coloring at the apex of the femora. The male often has a weak elytral costa from humerus to apex; in the female this is more pronounced. Both sexes have strong elytral punctation.

Colaspis ostmarki Blake

(Fig. 6)

Colaspis ostmarki Blake, 1973, pp. 86-87.

Length 5.5-8 mm, width 3-4.5 mm.

Elongate oval, shining yellowish brown, with deeper brown prothorax; prothorax moderately finely punctate and with undulate margin; elytra with coarser punctures, mostly in geminate rows, except near apex and margin where they become single, basal transverse depression on elytra below umbone, in female vestiges of costae along sides and at apex; females much larger than males.

Head with interocular space approximately half width of head, occiput and front sometimes entirely smooth, without punctures, sometimes densely and finely punctate, always a row of depressed punctures from eye to frontal tubercles, clypeus coarsely and densely punctate, anterior margin nearly straight over labrum, jaws deep brown. Antennae long and slender, yellow brown with seventh and terminal joint dark. Prothorax not twice as wide as long, convex, with undulate margin sometimes verging on being angulate, surface shining and usually deeper brown and finely punctate, sometimes more coarsely punctate. Scutellum deep brown. Elytra more than twice as long as prothorax with transverse depression below basal umbone, in female with costae along sides and subcostate at apex, in male with vestigial costae; punctation near suture and margin in single rows but between in geminate rows becoming single near apex; punctation of same pattern as in costate species. Body beneath and legs reddish brown, occasionally femora at apex slightly deeper brown.

Type.—Male and 31 paratypes, USNM Type No. 72430.

Type locality.—Changuinola, Panama, collected by H. E. Ostmark, June 26, 1972, and by C. A. Stephens, Apr. 21, 1971, on bananas.

Remarks.—This species has been found in numbers on 4,500 acres of bananas in Changuinola, northern Panama, near Almirante. It is closely related to *homoia* from Mexico. The females of *ostmarki* are shorter and broader than the females of *homoia* and have less distinct costae. Both are closely related to *fulvotestacea* described from Colombia, and are more coarsely punctate and yellow brown instead of reddish brown. Also, the elytra of *ostmarki* are not as elongated as those of *fulvotestacea*. In *ostmarki* the female is much larger than the male. The species is named after Dr. H. E. Ostmark, who has recorded its life history as it occurred on the banana plantation in Panama.

Colaspis belti Jacoby

(Fig. 7)

Colaspis belti Jacoby, 1881, p. 141.

Length 6.5 mm, width 3.4 mm.

Elongate oval, shining dark reddish brown; even darker margin of prothorax and elytra and an indistinct deep brown transverse area across elytra below basal umbone; legs with black apex on femora and half way down tibiae; body beneath with middle of prosternum almost piceous; abdomen reddish brown.

Head with interocular space half width of head, occiput and front smooth and shiny, almost impunctate except for line of depressed punctures from frontal tubercles to eye, clypeus densely and coarsely punctate, labrum yellowish brown with shallow emargination anteriorly, jaws dark. Antennae entirely pale yellow brown. Prothorax not twice as wide as long with sides undulate, almost toothed below middle, and darker than disc which is shining reddish brown and finely and moderately densely punctate. Scutellum dark brown. Elytra almost three times as long as prothorax and a little wider with transverse depression below umbone; ill-defined darker brown area below this, not extending to middle, margin deep brown, surface densely and coarsely punctate and becoming finer and less dense below middle; punctures being in lines becoming single near apex, in male specimen not much sign of costation except traces at apex. Body beneath with mesosternum and middle of prosternum nearly piceous, most of abdomen and legs reddish brown, apex of femora and basal third of tibiae black, tarsal joints unusually hairy and pale yellowish brown with darker claws.

Type.—Male, in British Museum (Natural History); cotype in USNM.

Type locality.—Chontales, Nicaragua, collected by T. Belt.

Remarks.—This is another of the *fulvotestacea* group, and in its proportions is nearest *fulvotestacea*, with the elytra nearly three times as long as the prothorax and a little wider. The elytra are much more coarsely punctate, however, and in the two specimens of *belti* seen with a deeper brown (although rather ill defined) transverse area across the elytra below the basal depression. The legs have the femora, apex, and base of tibiae nearly black. The antennae resemble those of *fulvotestacea* in being entirely pale.

Colaspis leiosomata Blake

(Fig. 8)

Colaspis leiosomata Blake, 1973, p. 85.

Length 6–6.5 mm, width 3–3.4 mm.

Elongate oval, shining reddish brown, with darker coloring at juncture of femora and tibiae, and dark seventh and terminal joint of antennae; prothorax finely punctate and with undulate margin; elytra with transverse depression below basal umbone, not costate in male, except possibly on side, and with vestiges of costae in female, elytral punctation moderately coarse and in female with traces of being in geminate lines.

Head with interocular space half width of head, occiput and front smooth and shiny, sometimes with a few very fine punctures, a depressed line of punctures running from eye to frontal tubercles, clypeus well defined and usually with a few coarse punctures, anterior margin varying from being nearly straight to widely curved over labrum, jaws piceous and large. Antennae long and slender, yellow brown with seventh and last joint dark. Prothorax not twice as wide as long with undulate sides, margin often darker brown, moderately convex, shining and usually with fine punctures. Scutellum smooth. Elytra almost $2\frac{1}{2}$ times as long as prothorax and somewhat wider, a transverse depression below basal umbone, very little trace of costae in males, but in females vestiges of costae on sides and at apex; punctation in males not noticeably geminate, but in females punctures geminate as in the costate species. Body beneath pale except at joining of femora and tibiae, which is darkened.

Type.—Male and three paratypes, USNM Type No. 72429.

Type locality.—San Carlos, Costa Rica, Schild and Bergdorf collectors.

Remarks.—This species has the dark reddish-brown coloration of *fulvotestacea* but differs from it in that the elytra are not so long and are more coarsely punctate. The aedeagus is much shorter than those of *ostmarki* and *cacaoi*. It is also close to *belti*, but it lacks the "belt" on the elytra and the antennae are differently colored; also, the body beneath is pale, not piceous, and the prothorax not so wide. However, the aedeagus is very similar.

Colaspis atrisuturalis, new species

(Fig. 9)

Length 6-6.5 mm, width 2.8-3 mm.

Elongate oblong oval, shining yellowish or reddish brown; elytra with basal margin and basal one-third of median suture piceous; upper part of head nearly smooth; prothorax densely punctate; elytra with basal depression and with geminate rows of punctures becoming single toward apex.

Head with interocular space half width of head, occiput and front impunctate except for depressed line of punctures from eye to frontal tubercles, clypeus punctate. Antennae with seventh and terminal joint dark. Prothorax not quite twice as wide as long with undulate margin, densely punctate. Scutellum smooth, brownish. Elytra approximately three times as long as prothorax and a little wider, with transverse depression below basal umbone, punctate, nearly geminate except at base and apex when in single lines, vestiges of costae at apex, deep piceous along basal edge and down along suture below scutellum. Body beneath and legs yellowish or reddish brown.

Type.—Male, USNM Type No. 72992.

Type locality.—Trinidad River, Panama, E. A. Schwarz collector, Feb. 28, 1911.

Other locality.—Trinidad River, Panama, August Busck, May 4, 1911.

Remarks.—This species belongs in the *fulvotestacea* group, with the depressed line of punctures on the frons and transverse elytral depression. The elytral color differs from that of the other species in the group. The base and one-third the length of the median suture are black. I have seen no females, which may show vestiges of costae. Several species of this group have an asymmetrical apex to the aedeagus, and when I dissected the first male of *atrisuturalis*, I found a very asymmetrical tip, and the second male was the same—extreme examples of the asymmetry sometimes found in the *fulvotestacea* group.

Colaspis fulva, new species

(Fig. 10)

Length 6.2 mm, width 2.5 mm.

Elongate oblong oval, deep reddish brown; prothorax large and finely punctate; elytra more coarsely punctate with traces of costae along the sides.

Head with interocular space half width of head, frontal tubercles clearly outlined with depressed row of punctures above, clypeus more coarsely punctate than upper face, labrum with small emargination anteriorly. Antennae with seventh joint dark. Prothorax not twice as wide as long with undulate margin, finely punctate, deep reddish brown. Scutellum deep brown. Elytra a little over twice as long as prothorax and not much wider, clearly depressed below basal umbone, in male (only sex seen) with traces of costae along side and in apical half; punctures along sides and in basal depression coarser, geminate punctation in basal half becoming single after middle to apex. Body beneath and legs reddish brown.

Type.—Male, in British Museum (Natural History).

Type locality.—San Andres, Tuxtla, Mexico, Sallé collection.

Remarks.—This species has the dark reddish-brown coloration of *fulvotestacea* and *belti*, but the legs are not black at the juncture of the femora and tibiae. The prothorax is unusually large and square.

Colaspis spadix, new species

(Fig. 11)

Length 5.2–6 mm, width 2.6–3.5 mm.

Oblong oval, shining, very dark reddish brown, with paler reddish-brown legs and undersurface; antennae pale with seventh joint dark; head with depressed row of punctures from eye to frontal tubercles, otherwise nearly impunctate; prothorax with undulate margin; elytra rather finely punctate in geminate rows.

Head with interocular space less than half width of head, occiput and front with only a few punctures, a row of depressed punctures from eye to tubercles, clypeus with only a few punctures, labrum small. Antennae with only seventh joint dark. Prothorax with undulate margin, rather finely and densely punctate, nearly twice as wide as long. Scutellum dark. Elytra nearly three times as long as prothorax with transverse depression below basal umbone, rather finely punctate; punctures near base in single row becoming double in depression and single again near apex, in female traces of flat costae more developed on sides and at apex, color of elytra even deeper reddish brown than prothorax, almost piceous. Body beneath and legs paler reddish brown, legs at joint deeper brown.

Type.—Male and six paratypes, USNM Type No. 72993.

Type locality.—Porto Bello, Panama, E. A. Schwarz collector, February and March 1911.

Remarks.—This is one of the darkest reddish-brown species of the *fulvotestaceae* group. It has the depressed line of punctures on the face and the transverse elytral depression common to the group. Also, it has in at least one male specimen examined the asymmetrical tip to the aedeagus, a feature that occurs in several species of the group.

Colaspis grandicollis, new species

(Fig. 12)

Length 5 mm, width 2.5 mm.

Elongate oblong oval, shining; head and prothorax deep reddish brown with margin of prothorax having metallic green luster; elytra yellowish brown; body beneath pale with mesosternum darker and with metallic luster, finely punctate; elytra more coarsely punctate than prothorax.

Head with interocular space approximately half width of head, occiput and upper front densely punctate, line of depressed punctures from eye to frontal tubercles, clypeus even more densely punctate, labrum pale yellowish brown. Antennae pale with seventh and apical joint dark. Prothorax large with toothed lateral margin, surface densely punctate, lateral margin with metallic luster. Scutellum brown. Elytra a little over twice as long as prothorax and a little wider, paler yellow brown than head and prothorax; punctures in single lines near suture, base, and apex, and coarser in transverse depression below umbone, and geminate. Body beneath paler yellow brown except mesosternum, which is dark with slight metallic luster, legs entirely pale.

Type.—Male, USNM Type No. 72994.

Type locality.—Paraiso, Canal Zone, E. A. Schwarz collector, Jan. 17, 1911.

Remarks.—This is another of the *fulvotestacea* group. The elytra are without costae in the male (female unknown), are reddish brown, and have a transverse depression below umbone and a line of indented punctures on the frons. It most closely resembles *fulvotestacea* in having a similarly large prothorax but differs in having green prothoracic margin and green undersurface. The aedeagus is similar to that of *fulva* but has a shorter tip.

Colaspis plicatula Jacoby

(Fig. 13)

Colaspis plicatula Jacoby, 1882, p. 146.

Euphytus plicatula Bryant, 1937, pp. 97-101.

Length 4.5 mm, width 2.2 mm.

Elongate oblong oval, shining dark reddish brown; prothorax darker, sometimes faintly green; abdomen paler yellowish brown; head and prothorax densely and finely punctate; elytra in male feebly costate, much stronger costae in female, between costae rows of geminate punctures, becoming single near apex, single lines near suture and margin.

Head with interocular space a little more than half width of head, densely punctate, and with depression down front, clypeus more coarsely punctate, shallowly emarginate over labrum. Antennae with last five joints dark. Prothorax almost twice as wide as long with nearly rounded sides and aeneous green margin, surface finely and very densely punctate. Scutellum dark. Elytra more than three times as long as prothorax and a little wider, costae pronounced in female, less so in male, densely punctate between, rows next to suture and margin single, also single near apex, otherwise geminate, margin green. Body beneath with yellowish-brown abdomen, darker mesosternum.

Type.—In British Museum (Natural History); cotypes, in Museum of Comparative Zoology and USNM.

Type locality.—Capetillo, Guatemala, G. C. Champion.

Remarks.—Bryant placed this species in the genus *Euphrytus* without giving a reason. Possibly he did so because the margin of the prothorax is often rounded but with an angulate tendency. Otherwise it is a regular semicostate species of *Colaspis*, with the female being definitely costate. The aedeagus resembles that of *C. subcostata* Jacoby; the apex has a similar long point.

Colaspis macroptera, new species

(Fig. 14)

Length 5.6 mm, width 2.7 mm.

Elongate oblong oval, shining, deep brown, with legs slightly paler brown; three basal antennal joints and joints 8 and 9 pale, rest more or less dark; head and prothorax finely punctate; elytra more coarsely so and in mostly geminate lines, in female with vestiges of costae along sides.

Head with interocular space approximately half width of head, moderately densely punctate over occiput and front and more densely punctate on clypeus which is clearly outlined, median depression on front. Antennae with basal three joints pale, rest more or less dark with joints 8 and 9 sometimes pale. Prothorax not twice as wide as long with undulate sides, not very convex, shining deep brown with fine punctures. Scutellum deep brown. Elytra more than three times as long as prothorax and a little

wider, entirely deep brown, a transverse depression below umbone, and in female traces of lateral costae from humerus to apex and also at apex; punctation coarser than on prothorax, dense and somewhat irregular in basal half becoming more geminate below middle, lines single near suture and lateral margin. Body beneath dark brown, legs a little paler.

Type.—Female, in British Museum (Natural History).

Type locality.—Irazu, 6,000–7,000 ft, H. Rogers.

Remarks.—At first glance because of the transverse basal depression on the elytra, one would place this species in the *fulvotestacea* group, but the head lacks the depressed line of punctures common to the group and the prothorax is much smaller. It is labeled in the material sent me from the British Museum (Natural History) as *C. subcostata* Jacoby, but a cotype of that species in the U.S. National Museum from Volcan de Chiriqui, the type locality, is different from *macroptera*. The prothorax of *subcostata* is larger proportionally. Jacoby does not give Irazu (locality of Brit. Mus. Nat. Hist. specimens) as one of the localities of *subcostata*.

Colaspis longipennis, new species

(Fig. 15)

Length 5 mm, width 2.4 mm.

Elongate oblong oval, shining dark yellow brown; antennae with joints 7, 10, and 11 dark; prothorax finely and densely punctate; elytra more than three times as long as prothorax, densely punctate; in female traces of costae on sides and at apex.

Head with interocular space more than half width of head, front and clypeus densely punctate, median depressed line down front. Antennae with joints 7, 10, and 11 dark. Prothorax not twice as wide as long with sides undulate, surface densely punctate. Scutellum also with few punctures. Elytra more than three times as long as prothorax and not much wider, densely and in basal half and along sides coarsely punctate with traces of costae on sides and at apex; punctures near apex tending to be in single lines. Body beneath and legs entirely yellow brown without aeneous metallic luster.

Type.—Female, in British Museum (Natural History).

Type locality.—Cubilguitz, Vera Pas, Champion collector.

Remarks.—Although this was identified as *fulvotestacea* in the material sent me from the British Museum (Natural History), it does not even belong in that species group. It is without the line of depressed punctures on the face and pronounced basal depres-

sion on the elytra. It is more closely related to *plicatula*, but it has even more elongated elytra and less developed costae in the female. No males were seen.

Colaspis subcostata Jacoby

(Fig. 16)

Colaspis subcostata Jacoby, 1881, p. 142.

Length 5.7 mm, width 2.6 mm.

Elongate oblong oval, shining dark reddish brown; prothorax with undulate sides; elytra with basal depression, densely and geminately punctate in basal half becoming singly punctate near apex.

Head with interocular space less than half width of head, eyes large, front and clypeus densely punctate, labrum with small emargination anteriorly. Antennae with joints 7, 8, and two terminal joints deeper brown but not piceous. Prothorax widest below middle, moderately convex, and with undulate lateral margin, finely but not densely punctate, shining deep brown. Scutellum reddish brown. Elytra not three times as long as prothorax and a little wider, deeper brown than prothorax and densely and moderately coarsely punctate; punctures being geminate but becoming in single lines near apex. Body beneath and legs entirely reddish brown, middle tibiae of legs somewhat curved.

Type.—In British Museum (Natural History); cotype, in USNM.

Type locality.—Volcan de Chiriqui, Panama, Champion collector.

Remarks.—Jacoby described the female as being lighter brown, the elytra with a metallic tint, and with longitudinal costae.

Colaspis variabilis, new species

(Fig. 17)

Length 5.5 mm, width 2.8 mm.

Elongate oblong oval, shining, varying from pale reddish brown to dark brown, almost piceous, to dark brown with green luster over upper surface; prothorax finely punctate; elytra densely geminate punctate with single lines near suture and at apex, a depression below basal umbone.

Head with eyes large and interocular space less than half width of head, upper part of head finely punctate, clypeus coarsely punctate. Antennae with apical five or six joints dark. Prothorax not twice as wide as long, not very convex, lateral edges undulate and

wider below middle, shiny, finely punctate. Scutellum dark piceous. Elytra only a little wider than prothorax and not quite three times as long, with depression below basal umbone, and in male only traces of costae near apex where geminate punctures become single. Body beneath deep reddish brown, legs reddish brown.

Type.—Male, in British Museum (Natural History).

Type locality.—Volcan de Chiriqui, Panama, 2,000–3,000 ft, Champion collector.

Remarks.—I have examined three specimens, all males, varying from pale reddish brown to almost piceous; one has a metallic green luster over the upper surface. I found the aedeagus the same in all. In the Jacoby material this species is identified as *C. fastidiosa* Lefèvre (fig. 18). I have examined a cotype of *fastidiosa* (from type locality, Puerto Cabello, Venezuela). It differs from *variabilis* in having an entirely different shaped prothorax, and the terminal joints of antennae are pale. In *variabilis* the terminal joints are dark and the aedeagus has a different shape.

Colaspis inconspicua Jacoby

(Fig. 19)

Colaspis inconspicua Jacoby, 1890, p. 224.

Length 6.7 mm, width 3.2 mm.

Elongate oblong oval, shining piceous with brownish tinge; elytral punctures faintly aeneous; front of head and prothorax finely punctate; elytra with regular rows of punctures between costae; hind tibiae widened at middle in male.

Head with interocular space a little more than half width of head, front and clypeus finely punctate, in Chiriqui specimen face yellowish brown, clypeus shallowly emarginate over labrum. Antennae with basal joints pale, outer ones sometimes deeper brown. Prothorax not twice as wide as long, sides bluntly angulate below middle, surface rather finely and not densely punctate. Scutellum dark. Elytra not three times as long as prothorax and a little wider, with regular though not very elevated costae between these regular rows of geminate punctures, except row next to suture which is single, all tending to become single near apex. Body beneath dark, legs yellowish brown, hind tibiae widened near middle in male.

Type.—In British Museum (Natural History).

Type locality.—Volcan de Chiriqui, Panama, Champion collector.

Remarks.—Although Jacoby includes "specimens from Brazil" as this species, the ones I have seen from Brazil, though strongly resembling *inconspicua*, have a wider prothorax, the hind tibiae of the male are wider at the middle, and they are fulvous brown instead of nearly piceous. Possibly they are Lefèvre's *C. interstitialis*. In the material from the British Museum (Natural History) labeled *C. inconspicua*, three specimens are this species and one (also from Chiriqui) is not this species. It is smaller with a brownish head and prothorax. (Jacoby noted he had two specimens with this coloration.) It has less distinct costae and finer elytral punctation. Because of this confusion I am hereby designating a large male of the three specimens from the British Museum (Natural History) as the lectotype of *inconspicua*. Jacoby's description is of this larger species. He compared *inconspicua* with *interstitialis* of Brazil, a species very close to it. I am describing the smaller species as *C. consanguinea*.

Colaspis levicostata, new species

(Fig. 20)

Length 5–5.6 mm, width 2.6 mm.

Elongate oblong oval, faintly shining, pale yellow brown; in male, with mesosternum deep brown; prothorax with prominent lateral toothings, disc very finely and densely punctate; elytra more coarsely punctate except where geminate rows become single lines near apex, slight depression below basal umbone, in female, apical half of elytra semicostate.

Head with interocular space half width of head, median depressed line down front, clypeus and front densely and coarsely punctate. Antennae pale yellow brown with five apical joints missing. Prothorax not very convex, rather flat, with prominently toothed sides and very dense punctation. Scutellum reddish brown. Elytra slightly more than three times as long as prothorax and a little wider, transverse depression below basal umbone; dense punctation, tending to be oblong, in geminate rows except near apex and suture where in single lines; no costation of elytra in male but in female flat costae apparent at apex. Body beneath in male with mesosternum and adjoining abdomen deep brown, elsewhere pale yellowish brown; in female, body beneath yellow brown entirely.

Type.—Male and one female paratype, USNM Type No. 72995.

Type locality.—San Jose, Costa Rica, M. Vallerio collector.

Remarks.—This is one of the smaller species of the group of yellow-brown semicostate species with the basal transverse depres-

sion on the elytra. It is not close to the *fulvotestacea* group as it lacks the depressed row of punctures on the face. The female specimen has rather flat but quite distinct costae in the apical half of the elytra and is more coarsely punctate.

Colaspis consanguinea, new species

(Fig. 21)

Length 4.8–7.2 mm, width 2.7–3.8 mm.

Elongate oblong oval, shining deep dark brown in some specimens overspread by faint metallic sheen; body beneath with prosternum and mesosternum mostly green; abdomen and legs deep reddish brown.

Head with interocular space half width of head, occiput smooth and shiny, front with fine punctures, clypeus coarsely and densely punctate, labrum deep brown. Antennae with basal joints yellowish brown, remainder deeper brown. Prothorax not twice as wide as long, convex, with sides angulate below middle, rather finely punctate, shining, margin green. Scutellum dark. Elytra almost three times as long as prothorax and a little wider, a faint depression below basal umbone, faintly costate with more evidence of costae along sides and at apex, punctate intervals mostly geminate, becoming single toward apex, varying from deep reddish brown to slight greenish luster, particularly in punctures. Body beneath deep reddish brown with prosternum and mesosternum with green luster.

Type.—Female and 93 paratypes, USNM Type No. 72996.

Type locality.—Tabernella, Canal Zone, Panama, August Busck collector, May 29, 1907.

Other localities.—Panama: Volcan de Chiriqui, Champion; Paraiso, E. A. Schwarz; Ancon, Boqueron River, A. Busck; Trinidad River, A. Busck; Cabima, A. Busck; Corazol, A. Busck; Gatun. In banana debris from Colombia.

Remarks.—Of the 137 specimens examined, none are males. Jacoby confused this species with *inconspicua*.

Colaspis uncotibialis, new species

(Fig. 22)

Length 5.4–6.5 mm, width 3.2–3.5 mm.

Oblong oval, shining deep brown, with dark reddish-brown legs; antennae pale yellow brown with seventh and terminal three joints

usually dark; head and prothorax with scattered punctures; elytra costate along sides and at apex and more or less geminate punctate.

Head with interocular space half width of head, upper part of head rather sparsely punctate, clypeus well defined and with punctures. Antennae rather short, yellow brown, with seventh and three apical joints dark. Prothorax not very convex, margin with green luster, disc shining, smooth, with scattered groups of punctures. Scutellum dark. Elytra not three times as long as prothorax and wider, depression below basal umbone, costae along sides and near apex; punctures near suture in single lines and in single lines near base and apex, irregularly geminate elsewhere, lateral margin greenish. Body beneath deep brown, prosternum with few punctures, legs reddish brown, middle tibiae noticeably bowed.

Type.—Male and five paratypes, USNM Type No. 72997.

Type locality.—Barro Colorado Island, Panama, F. Monros, Jan. 15, 1953; J. Zetec, January 1937, November 1937, and April 1940.

Other localities.—Panama: Porto Bello, E. A. Schwarz, Feb. 24, 1911; Changuinola, H. E. Ostmark.

Remarks.—This species resembles *C. sculpa* Jacoby but is larger and has a wider prothorax. The bowed middle tibiae are distinctive of this species. H. E. Ostmark has collected it on bananas.

Colaspis panamensis, new species

(Fig. 23)

Length 4.8–5 mm, width 2.8 mm.

Broadly oblong oval, shining deep brown to piceous above, with head and undersurface dark reddish brown and faint metallic luster on lateral edges, epipleura, middle of prosternum, and mesosternum; head densely and finely punctate; prothorax with scattered punctures; elytra densely and rugosely punctate.

Head with interocular space more than half width of head, front and clypeus more or less continuous with only small indication of boundary, densely and finely punctate, labrum reddish brown. Antennae with basal three or four joints reddish brown, remainder mostly dark, in one specimen ninth joint pale. Prothorax approximately twice as wide as long with median lateral tooth slightly below middle, surface somewhat rugose with scattered groups of punctures. Scutellum black. Elytra more than three times as long as prothorax and somewhat wider, surface transversely rugose between punctures, and in female with some traces

of costae, especially at apex; punctation rather irregular but in single lines near suture and at apex, and more or less geminate elsewhere. Body beneath with epipleura, mesosternum, and middle of prosternum shining green, otherwise deep reddish brown, legs dark reddish brown.

Type.—Female. USNM Type No. 72998.

Type locality.—Porto Bello, Panama, A. Busck, Apr. 21, 1912.

Other locality.—Male from Paraiso, Panama, A. H. Jennings collector.

Remarks.—This is a somewhat smaller and more densely punctate species than *uncatibialis*, but it resembles it with its similar wide prothorax and dark, shiny, deep brown to piceous coloring.

Colaspis hypochlora Lefevre

(Figs. 24 and 26)

Colaspis hypochlora Lefèvre, 1878, p. 123.

Colaspis hypochlora Jacoby, 1881, p. 138.

Length 5.2 mm, width 3 mm.

Oblong oval, yellowish or reddish brown, with dark metallic green undersurface; in type specimen with abdomen brown, and often greenish margin to prothorax and elytra; prothorax with a tooth below middle; elytra with two costae next to suture wider.

Head with interocular space more than half width of head, occiput smooth, front thickly punctate even over faintly marked frontal tubercles and on clypeus, mouth parts piceous. Antennae with joints 7, 10, and 11 deeper brown than rest. Prothorax almost twice as wide as long with curved sides and below middle a distinct angularity, basal margin sinuate over scutellum, moderately convex and more densely punctate on sides than in middle, lateral margin faintly metallic green. Scutellum reddish brown. Elytra more than three times as long as prothorax and wider with first two costae near suture wider; first two rows of punctures single, third semigeminate, others geminate, ninth row single. Body beneath with middle of prosternum and mesosternum metallic green, anterior part of epipleura green, abdomen brown.

Type.—Female, in Lefèvre's collection, ex museo E. Steinheil, Paris Museum.

Type locality.—Colon, Panama.

Remarks.—Nicole Berti of the Paris Museum sent two specimens from the Lefèvre collection. One is originally from the Steinheil collection and bears the Lefèvre label *Colaspis hypometallica* Lef. Berti stated that it is surely the type of *C. hypochlora*, as it

was arranged by Lefèvre with specimens of *hypochlora* following it. Although Lefèvre labeled it *hypometallica*, he later changed it to *hypochlora*, under which name it was published. The other specimen is labeled "Mex." It is the same species though paler with the abdomen green. According to correspondence from Berti, specimens in the series arranged by Lefèvre were collected also in Mexico, Guatemala, Costa Rica, and Panama.

Colaspis blakeae Ostmark

(Fig. 25)

Colaspis blakeae Ostmark, 1975, p. 2.

Length 5-5.55 mm, width 2.5-2.7 mm.

Elongate oblong oval, yellow brown, with margin of prothorax and elytra, often prosternum and mesosternum, lustrous green; abdomen usually brown; sometimes middle of front of head with green luster; head finely punctate; prothorax more coarsely but not densely punctate; elytra with costae and punctate intervals somewhat irregular, first two costae wide and intervals more or less singly punctate, sometimes punctures faintly green.

Head with interocular space half width of head, occiput more or less smooth, front and clypeus finely punctate, furrow running down middle of front, often with green luster, clypeus well defined, anterior margin over labrum nearly straight, jaws large, dark brown. Antennae usually with 7th, half of 10th, and 11th joints dark. Prothorax not twice as wide as long, moderately convex with rounded and not at all angulate sides, margin green, surface moderately coarsely but usually not densely punctate. Scutellum yellowish or reddish brown. Elytra wider than prothorax and three times as long, first two costae wide with single rows of punctures between, rest of costae irregularly varying in width with intervals also having punctures varying from geminate to alternate to single, costae not well elevated, somewhat flattened and stretched out between the punctures, margin and epipleura green. Body beneath usually with prosternum and mesosternum greenish, sometimes abdomen with faint green luster, usually brown.

Type.—Male and 40 paratypes (20 males, 20 females), USNM Type No. 72775.

Type locality.—Santa Marta, Colombia, Dec. 8, 1973, W. E. Bolton, on banana fruit.

Other localities.—Panama: Boco del Toro, H. S. Barber, E. A. Schwarz; Puebla Nueva, 8 mi from Panama City, Papaya Planta-

tion, H. Morrison; Gamboa, E. F. Dietz and J. Zetek; Puerto Armuelas, H. E. Ostmark. Colombia: Sevilla, Normandia Farm, R. Johnston, G. Salt; Rio Frio, R. Johnston, A. A. Pollan.

Remarks.—This species is characterized by the wide furrow down the front of the head, by the rounded sides of the prothorax, and by the irregularity of the costae and unevenness of the punctures between. The first two costae near the suture are noticeably wider than the rest. The costae are stretched sideways up and down their length about the punctures, with the punctures sometimes single, often alternate, and infrequently geminate. In this respect, the punctures differ from those of *hypochlora* and *C. gemellata* Lefèvre. According to Nicole Berti, specimens of *blakeae* seem midway between *hypochlora* and *gemellata* and were not in the Lefèvre collection. *C. blakeae* was identified as *hypochlora* by E. A. Schwarz and H. S. Barber of the U.S. National Museum. Salt (1928) referred to *hypochlora* as the species that was devastating banana plantations in Sevilla, Colombia. Many specimens from Sevilla, collected by R. Johnston and also by Salt, are in the U.S. National Museum. However, they are definitely not *hypochlora*. The irregularity of the elytral punctures characterizes *blakeae* and distinguishes it from *hypochlora*. The aedeagus is noticeably longer than that of *hypochlora*.

Colaspis chapalensis, new species

(Fig. 27)

Length 5.2–6 mm, width 2.6–3 mm.

Elongate oblong oval, yellow brown above, with undersurface lustrous green; seventh and apical joint of antennae dark; elytral costae even and with punctures between geminate except near suture and margin.

Head with interocular space more than half width of head, front and clypeus densely punctate, faint median line down front, clypeus well defined, anterior margin widely and shallowly emarginate. Antennae with seventh and apical joints dark. Prothorax not twice as wide as long with rounded sides, faintly angulate in some specimens and often with tinge of green luster, densely punctate. Scutellum pale with dark edge. Elytra more than three times as long as prothorax and a little wider with even costae and usually geminate punctation between except in rows near suture, which may be alternate and single toward apex. Body beneath with epipleura, mesosternum, abdomen, and middle of prosternum lustrous dark green, legs pale yellow brown.

Type.—Male and five paratypes, USNM Type No. 72999.

Type locality.—Chapala, Jalisco, Mexico, R. B. Lattimore, May 21, 1949.

Other localities.—Mexico: Cuernavaca, Morelos, L. J. Liponsky; Cautla, Morelos, L. J. Liponsky; 7 mi south Yantipac, Morelos, Orway and Naumann; Acapulco, Guerrero, L. J. Liponsky; Iguala, Guerrero, 2,400 ft, Kansas Univ. expedition.

Remarks.—The even width of the elytral costae is the chief means of distinguishing this species from *hypochlora* and *C. freyi* Bechyne, both of which have the first two costae conspicuously wider. Moreover the apex of the aedeagus lacks the angularity before the tip as in both *hypochlora* and *freyi*. H. S. Barber labeled this a new species.

Colaspis zanthophaia, new species

(Fig. 28)

Length 5.5–6.6 mm, width 3.2–3.6 mm.

Elongate oblong oval, faintly shining; upper surface reddish brown, prothorax usually deeper in coloring, undersurface dark reddish brown, sometimes with faint metallic green luster on mesosternum and prosternum, elytral margin green; elytra evenly costate.

Head with interocular space half width of head, front densely punctate, often with a short hair from each puncture, clypeus rather indistinctly defined with fewer punctures. Antennae with 7th, 10th, and 11th joints dark. Prothorax not twice as wide as long with faint angularity below middle, usually deeper brown than elytra and densely punctate. Scutellum brown. Elytra a little wider than prothorax and three times as long with regular costae and intervals with geminate punctation except near suture, margin, and apex, where punctures tend to be in single lines, margin green. Body beneath dark reddish brown, sometimes faintly metallic green in middle of prosternum and mesosternum.

Type.—Male and eight paratypes, USNM Type No. 73003.

Type locality.—Livingston, Guatemala, Barber and Schwarz collectors.

Other localities.—Mexico: Cordoba, Fred Knab; Presidio, Vera Cruz. Honduras: Tegucigalpa, F. J. Dyer. British Honduras: M-Tee District.

Remarks.—The large elongate shape, regular elytral costae, and scarce metallic green (only on margin of elytra), together with the shape of the aedeagus, characterize this species.

Colaspis stenorachis, new species

(Fig. 29)

Length 5-5.8 mm, width 2.4 mm.

Elongate oblong oval, feebly shining pale yellow brown above, dark metallic green below, with sides of prosternum yellow brown; antennae with 7th, 10th, and 11th joints dark; head densely punctate; elytra with narrow, rather flat costae, geminate punctures between except near suture and margin where they are in single lines.

Head with interocular space more than half width of head, densely punctate throughout. Antennae pale with seventh and last joints dark. Prothorax more or less densely punctate, sides with faint angularity below middle, sometimes almost entirely rounded, not twice as wide as long. Scutellum pale. Elytra three times as long as prothorax and a little wider, costae very narrow and inconspicuous, with regular geminate punctures between except near suture and margin. Body beneath, except pale sides of prosternum, dark metallic green, legs pale yellow brown.

Type.—Male and seven paratypes, USNM Type No. 73000.

Type locality.—3 km east of Celaya, Guanajuata, Mexico, R. H. Painter, June 16, 1965, collected on corn.

Remarks.—This species has very narrow elytral costae, and the regular geminate punctation between fills up most of the space on the elytra. Dorsally it is pale yellow brown, but ventrally it is dark metallic green except the sides of the prosternum.

Colaspis freyi Bechyne

(Figs. 30 and 31)

Colaspis freyi Bechyne, 1950, p. 254.

Colaspis freyi adscripta Bechyne, 1950, p. 254.

Length 5-5.8 mm, width 2.5-2.9 mm.

Elongate oblong oval, moderately shiny, yellowish or reddish brown above, usually with margin of prothorax and epipleura metallic green; antennal joints 6, 7, and three apical joints usually dark; first two costae wider than rest.

Head with interocular space more than half width of head, densely punctate, without any dividing line between clypeus and front, anterior margin of clypeus widely and shallowly emarginate. Antennae with seventh, often sixth, and last three antennal joints more or less dark. Prothorax strongly convex, not twice as wide as long, with sides angulate below middle, margin often lustrous

green, prosternum usually green, sometimes only in middle, surface moderately densely punctate. Scutellum deeper brown. Elytra not quite three times as long as prothorax and considerably wider with first two costae wider than rest and punctures between mostly in single lines, sometimes third line also single, and in many specimens lines in part single. Epipleura and body beneath lustrous green, with yellow-brown legs.

Types.—Of both *C. freyi* and *C. freyi adscripta* Bechyne, females, in Frey Museum, West Germany.

Type locality.—Of *C. freyi*, Jalapa, Mexico; of *freyi adscripta*, Surrubres, Costa Rica.

Other localities.—Mexico: San Luis Potosi, El Salto, 10 mi SE. Jalapa, Vera Cruz, 3,000 ft Cordoba, F. Knab. Costa Rica: Bebedero, Tortuguera, F. Nevermann; Turrialba, F. Nevermann; Limon, Alajuala. Honduras: Pimiento Mountains.

Remarks.—Bechyne wrote that the subspecies *adscripta* differed from the type of *freyi* in that the second and fourth intervals of the elytra are more feebly convex than the others. Based on examining many specimens, I have concluded that this slight difference is within the normal range of a species and I thereby synonymize this subspecies. *C. freyi* is narrower than *hypochlora* and the undersurface is usually green, whereas in *hypochlora* the abdomen is often brown. The tip of the aedeagus, when viewed from above as in figure 30, has a prolonged point on each side of the tip. This is only apparent when the tip is viewed from above, and it identifies the species with certainty. The illustrated aedeagus is from the only male in Bechyne's collection. It is from Bebedero, Costa Rica. H. E. Ostmark collected this species on bananas.

Colaspis kirra, new species

(Fig. 32)

Length 5–5.5 mm, width 2.5 mm.

Elongate oblong oval, moderately shiny, deep reddish brown; head, five apical joints of antennae, prothorax, and undersurface nearly piceous; legs reddish brown; head and prothorax densely punctate; elytra costate with geminate punctation between except in two rows next to suture which are mostly singly punctate.

Head with interocular space more than half width of head, occiput and front dark and densely punctate, clypeus more coarsely punctate and paler reddish brown, anterior margin shallowly emarginate over labrum, mouth parts dark. Antennae with apex of basal joints dark and apical five joints dark. Prothorax not twice

as wide as long with almost rounded margin, only trace of angularity below middle, surface densely punctate, almost piceous, deep reddish brown above and below. Scutellum dark. Elytra not quite three times as long as prothorax and wider with narrow costae, intervals coarsely geminate punctate except rows next to suture which are mostly single, apex of rows tending to be single. Body beneath dark brown without any aeneous luster, legs reddish brown.

Type.—Male, in Museum of Comparative Zoology; one male paratype, USNM No. 73001.

Type locality.—Costa Rica, Van Patten collector, from second Jacoby collection.

Remarks.—The aedeagus of this species is similar to that of the Cuban *C. amplcosta* Blake. *C. kirra* has much the same shape, but the elytral costae are narrower and the color much darker and without aeneous luster. In the Jacoby collection at the Museum of Comparative Zoology this species has been placed under *C. hypochlora* Lefèvre (? by Bowditch). It is narrower than *hypochlora*, with narrower elytral costae, and it lacks the aeneous luster. The two costae next to the suture are not as wide as in *hypochlora*, and the aedeagus is somewhat different.

Colaspis suturalis Lefèvre

(Fig. 33)

Colaspis suturalis Lefèvre, 1878, p. 123.

Colaspis suturalis Jacoby, 1881, p. 143.

Length 5–5.5 mm, width 2.7 mm.

Elongate oblong oval, shining yellowish or reddish brown; head having metallic luster; elytral margin and wide sutural area also metallic green; antennae except four basal joints dark; body beneath brown, usually with metallic luster; apex of femora and tibiae and tarsal joints also dark.

Head with interocular space half width of head, occiput and front densely punctate, clypeus more coarsely punctate, occiput often reddish brown but front usually with metallic green luster. Antennae with four basal joints pale, remainder dark. Prothorax not twice as long, usually with sinuate margin, sometimes angulate, densely punctate, reddish or yellowish brown. Scutellum dark brown. Elytra more than three times as long as prothorax and wider, with regular and somewhat flattened costae, two intervals near suture being punctate, remainder except near base and apex geminate punctate, yellowish or reddish brown with wide green

or blue suture area and also near margin greenish or bluish. Body beneath dark brown with aeneous luster, femora and often tibiae dark at apex, tarsi dark.

Type.—In Paris Museum, Lefèvre collection.

Type locality.—Nare (Colombia).

Other localities.—Mexico: St. Lucretia, Vera Cruz, E. G. Smythe; Chapala, N. Yucatan, Tehuantepec, Fred Knab. Honduras: La Ceiba, F. J. Dyer. Guatemala: San Jose, Fred Knab. Costa Rica: Coyolar, C. H. Ballou; Hiquito, Pablo Schild. Panama: Bugaba, Champion. Also occurs in Colombia and Bolivia.

Remarks.—The wide dark sutural area easily identifies this species.

Colaspis chloropsis, new species

(Fig. 34)

Length 5-5.6 mm, width 2.6-2.8 mm.

Elongate oblong oval, faintly shining, yellowish to reddish brown; front of head usually dark with metallic luster, also edges of prothorax and elytra; undersurface dark green; tarsal joints often dark; middle costae of elytra very narrow.

Head with interocular space half width of head, clypeus well defined and more or less punctate, upper front densely punctate and usually dark green, clypeus and labrum paler. Antennae with seventh and last two or three joints dark, often joints 4, 5, and 6 semidark. Prothorax with sides rounded, faintly angulate at middle, and with metallic luster, surface often more densely punctate on sides, giving darker look to sides. Scutellum pale. Elytra three times as long as prothorax and wider, also with dark metallic edges, two costae near suture wide with single rows of punctures between, middle costae narrow, intervals between with geminate punctation. Body beneath dark with metallic green luster, legs pale except often tarsal joints dark.

Type.—Male, USNM Type No. 73002.

Type locality.—Nicaragua, taken in bananas at New Orleans, La.

Other localities.—Guatemala: Guatemala City, O. L. Cartwright; Duenas, Champion. San Pedro de Montes Oca, Costa Rica, C. H. Ballou. Oaxaca, Mexico, R. Greenfield. Department Morazan, Honduras, T. H. Hubbell.

Remarks.—The green metallic color of head, undersurface, edges of prothorax and elytra, and sometimes tarsal joints, as well as dark antennal joints, coupled with narrow middle elytral costae, characterize this species.

Colaspis championi Jacoby

(Fig. 35)

Colaspis championi Jacoby, 1881, pp. 137-138.*Colaspis simplicipes* Bechyne, 1950, pp. 253-254.

Length 7-9 mm, width 3.5-4.5 mm.

Oblong oval, yellowish or pale reddish brown, with aeneous green edges to prothorax and elytra and sometimes elytral punctures; prosternum in middle and often mesosternum aeneous; each elytron with four prominent costae, all rather flat; punctures between mostly geminate except in rows near suture and margin.

Head with interocular space a little more than half its width, densely punctate over occiput and front and a few punctures on clypeus, smooth over tubercles and lower part of clypeus, punctures often shining metallic; labrum with small emargination anteriorly, jaws piceous. Antennae pale with 7th, 10th, and 11th joints dark. Prothorax approximately twice as wide as long and almost as wide as elytra, with sides more or less angulate below middle, yellow brown with very dense punctation and aeneous lateral and basal margins. Scutellum pale. Elytra more than three times as long as prothorax, each elytron with four more prominent but rather flat costae, between which double rows of geminate punctures except in rows next to suture and margin, punctures often with aeneous sheen and rather large, leaving only very narrow midcostae, lateral margins of elytra aeneous. Body beneath with middle and sometimes entire prosternum, often mesosternum in part aeneous, abdomen usually yellow brown, hind tibiae in male not dilated.

Cotype.—In British Museum (Natural History) and in Bowditch collection, Museum of Comparative Zoology. In latter are two specimens from San Geronimo, Guatemala, two from Presidio, Mexico, and one from Jalapa, Mexico.

Type.—Of *C. simplicipes* Bechyne, from Volcan Colima, Mexico, in Zoologischer Staats Sammlung, Munich; paratype in Frey Museum, West Germany.

Other locality.—San Bernardino Ranch, Hereford, Ariz., collected by Douglas on corn silk.

Remarks.—There is no doubt that Bechyne's species, *simplicipes*, is the same as *championi* Jacoby. I have dissected a male paratype of Bechyne's species and found the aedeagus to be the same as that of *championi*, a shape that is unusual in the genus because of the

very long narrow tip. *C. championi* differs from *C. confusa* Bowditch not only in the shape of the aedeagus but also in the shape of the prothorax, which is much shorter in the former. It also differs from both *confusa* and *C. similaris*, n. sp., in not having any dilation of the hind tibiae of the male. It is the palest of the three species. Often only the undersurface and lateral margins are aeneous, although sometimes the elytral punctures show an aeneous glitter. The clearest differences are to be found in the aedeagi of the three species.

Colaspis hesperia Blake

(Fig. 36)

Colaspis hesperia Blake, 1974, p. 8.

Length 4.6–6.2 mm, width 2.5–3.2 mm.

Elongate oblong oval, faintly shining yellow brown, with apical joints of antennae dark; sometimes head, prothorax, prosternum, and mesosternum deeper reddish brown; elytra with well-marked and even costae, interspaces usually with geminate punctation except near suture, margin, and apex, where they are in single line.

Head with interocular space half width of head; median depression down front; occiput, front, and clypeus all densely punctate; clypeus poorly defined. Antennae pale except last joint, which is dark. Prothorax with rounded sides, sometimes faintly angulate at middle, densely punctate, no sign of metallic luster. Scutellum pale. Elytra three times as long as prothorax and a little wider, with eight well-defined and regular costae, between which are rows of mostly geminate punctures becoming in single line near apex and sometimes also near base as well as suture. Body beneath usually pale yellow brown, but occasionally deeper reddish brown except abdomen.

Type.—Male, USNM Type No. 26906.

Type locality.—Pima, Ariz.

Remarks.—This pale yellow-brown species is distinguished from most other yellow-brown species in Mexico by lacking a dark metallic color. The elytra have regular, even costae, and the aedeagus is short and broad with a broadly pointed tip. This species ranges from western Texas through New Mexico to Arizona in the United States. It has been collected in Los Mochis, Sinaloa, Mexico, by C. T. Dodds.

Colaspis similaris, new species

(Fig. 37)

Length 7-8 mm, width 3.4-4.5 mm.

Oblong oval, feebly shining yellowish or reddish brown, with metallic green in back of eyes, prosternum, mesosternum, and lateral margins of prothorax and elytra; frequently elytral punctures with metallic luster; hind tibiae in male with slight widening in middle; head and prothorax densely punctate; elytral costae regular.

Head with interocular space approximately half width of head, occiput not as densely punctate as front or clypeus, often with metallic luster in punctures as well as behind eyes. Antennae with 7th, 10th, and 11th joints dark. Prothorax not twice as wide as long with somewhat sinuate green margin, base also green, surface densely punctate. Scutellum brown. Elytra approximately three times as long as prothorax and wider with regular yellowish or reddish-brown costae standing out against somewhat darker punctures, which are usually with green luster; punctures near suture and margin in single lines, otherwise geminate. Body beneath with middle of prosternum and mesosternum more or less green, abdomen and legs yellowish or reddish brown, sometimes with faint green sheen, hind tibiae in male slightly enlarged in middle.

Type.—Male and one female paratype, USNM Type No. 73004.

Type locality.—Atencingo, Mexico, E. G. Smythe, June 1, 1922, on mesquite.

Other localities.—Mexico: Cuantia, Morelos, H. S. Parfah and Koebele collectors; Cuernavaca, A. Fenyés; Tejupileo, Temescal-tepec, H. Hilton; Oaxaca, C. C. Dean. Honduras: Department Morazan, T. H. Hubbell, on chile pepper.

Remarks.—This is similar to *C. confusa* Bowditch and the females are difficult to distinguish. It is a little smaller and with not so much green on the elytra but with more on the body ventrally. In *confusa* the body beneath lacks green luster. The widening of the hind tibiae in the male is less than in *confusa*, and the aedeagus is short with a small tip. In *confusa* the aedeagus is long with a long narrow tip.

Colaspis viridiceps Schaeffer

(Fig. 38)

Colaspis viridiceps Schaeffer, 1933, p. 468.

Length 4.4-5.5 mm, width 2.2-2.4 mm.

Elongate oblong oval, pale yellow brown above; head usually with aeneous luster; margins of prothorax, elytra, and undersurface also aeneous; hind femora dark at apex; costae on elytra rather flat.

Head with interocular space a little over half width of head, densely punctate throughout, clypeus rectangular, with no dividing lines, base of head and labrum yellowish brown, rest green, labrum widely emarginate anteriorly, jaws reddish brown. Antennae pale with apical joints 7 to 11 more or less dark. Prothorax not quite twice as wide as long, with sides usually angulate below middle, tooth at each corner, not very convex, densely punctate, pale yellow brown with lateral margin usually aeneous, basal margin dark. Scutellum dark. Elytra three times as long as prothorax and a little wider with flattened costae except on sides; first two rows of punctures often alternating or single in part and unusually fine. Body beneath and epipleura dark aeneous, apex of hind femora and sometimes rest of femora dark.

Type.—In USNM.

Type locality.—Wheatfields near Globe, Ariz., Duncan collector.

Other localities.—Southern Arizona. Mexico: Guerrero; Aca-pulco, Iguala, Taxei; 15 mi SE. of Morelia; Michoncao; Nayarit; Tepec, San Blas. Lower California: Mulage, San Domingo, Comoda. Sinaloa: 26 mi north of Pericos, Alamos. Sonora: Hermosilla, Desenboque, San Bernardino, Rio Naya.

Remarks.—Schaeffer's name, *viridiceps*, easily identifies this pale yellow-brown species with its conspicuously shining green head and undersurface.

Colaspis confusa Bowditch

(Fig 39)

Colaspis gemmingeri Jacoby nec Harold, 1881, p. 137.

Colaspis confusa Bowditch, 1921, p. 26.

Length 7.5–8.5 mm, width 4–4.5 mm.

Oblong oval, dull yellowish or reddish brown; elytra having paler conspicuous costae, between which are punctures with metallic green luster; antennae pale with joints 7 and 11 dark.

Head with interocular space approximately half width of head, upper face smooth, below densely punctate, clypeus also punctate, median line down front. Antennae long and slender with seventh and apical joint dark. Prothorax not twice as wide as long; more or less densely punctate, lateral margin toothed below middle and with metallic greenish luster. Scutellum deep yellowish or reddish

brown. Elytra a little more than twice as long as prothorax and somewhat wider with prominent costae between which double rows of punctures separated by narrow elevated lines; punctures near suture, apex, and margin in single lines, punctures having distinct metallic green luster. Body beneath and legs yellowish brown, hind tibiae with prominent dilation on inner side in apical third.

Type.—Not so labeled in Bowditch collection.

Remarks.—Jacoby identified this Central American species as the South American species *C. gemmingeri* Harold. Bowditch recognized it as a new species and in his 1¹/₂-line description wrote that it differs from *gemmingeri* by having the dilation on the hind tibiae of the male in the apical third rather than in the middle as in *gemmingeri*. Bowditch named it *confusa*. He did not note the type nor type locality. However, four specimens in the Bowditch collection are undoubtedly the ones he described, as the hind tibiae of the three males are dilated in the apical third. One is from Rio Hondo, Honduras, Blancaneau, the second from Sierra de Durango, and the third from Berlize, British Honduras. The first locality is given by Jacoby under *C. gemmingeri* in the "Biologia." I hereby designate this specimen, a male, from Rio Hondo, Honduras, as the lectotype of *Colaspis confusa* Bowditch.

Colaspis viridiceps australis, new subspecies

(Fig. 40)

A specimen collected at Tejupelea, Temascaltepec, Mexico, by H. E. Hinton and H. L. Usinger, two specimens collected at Alamos, Sonora, Mexico, by R. P. Allen, and one from Venodio, Sinaloa, Mexico, by B. P. Clark at first appear different from *viridiceps*. They are smaller and paler, the head is dark brown or, in one specimen, with a very feeble metallic luster. The body beneath is also dark with little aeneous luster, and the hind femora have no trace of aeneous color. But the elytral punctation is the same as in typical *viridiceps*, and the aedeagus is the same shape. Although the general appearance is misleading, this is at most only a pale subspecies.

Type.—Male, USNM Type No. 73005.

Type locality.—Tejupelea, Temascaltepec, Mexico.

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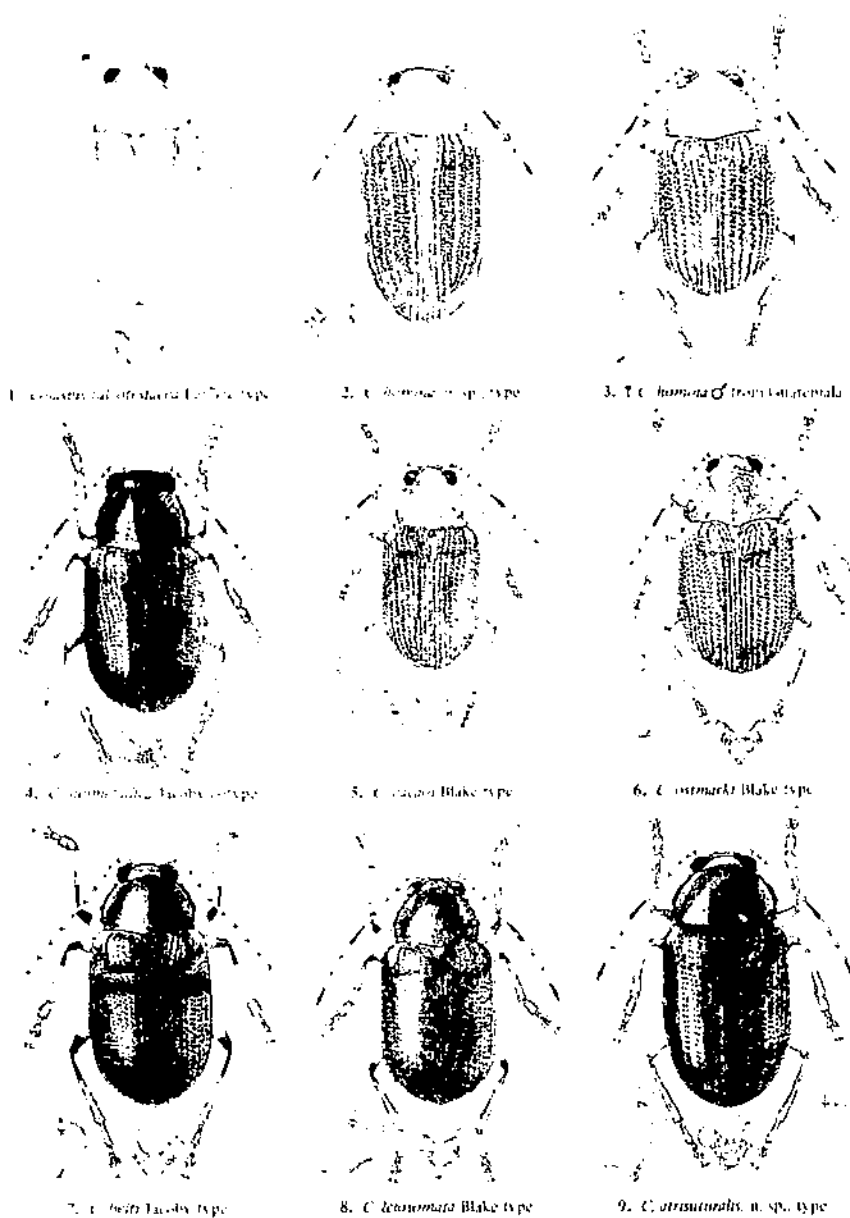
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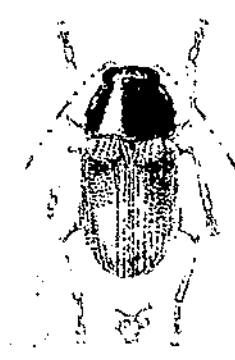




10. *Colaspis (Colaspis) sp. type*



11. *Colaspis (Colaspis) sp. type*



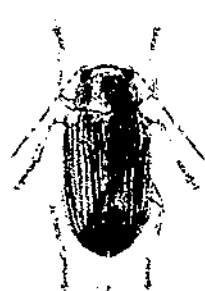
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13. *Colaspis (Colaspis) sp. type*



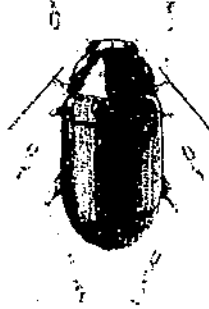
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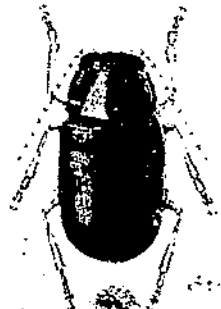
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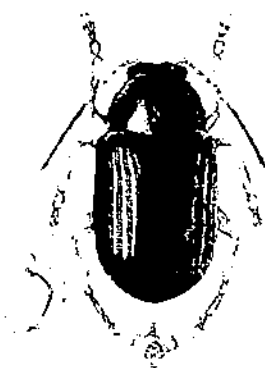
16. *Colaspis (Colaspis) sp. type*



17. *Colaspis (Colaspis) sp. type*



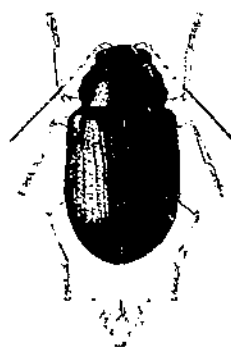
18. *Colaspis (Colaspis) sp. type*
from Puerto Cabello, Venezuela
(type locality)



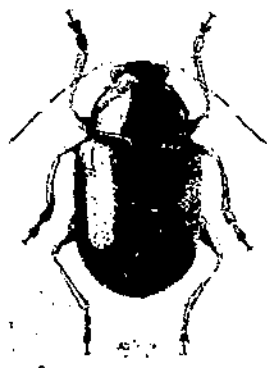
19. *C. claspimaculata* Fuchs



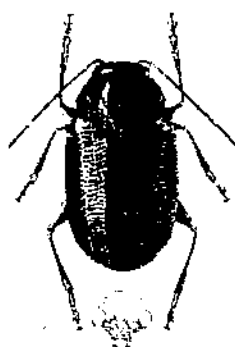
20. *C. testostata* n. sp. type



21. *C. consanguinea* n. sp.



22. *C. unicoloris* n. sp. type



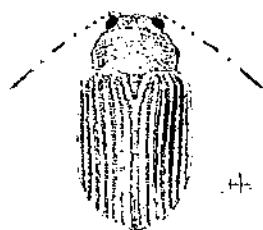
23. *C. panamensis* n. sp. type



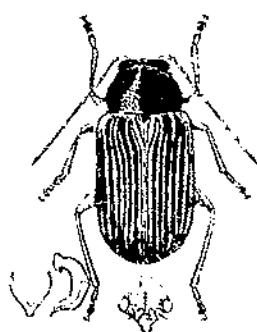
24. *C. hypochlora* Lefèvre type
from Mexico, Panama
(holotype from Mexico)



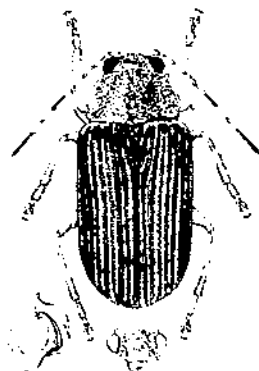
25. *C. blakei* Osborn



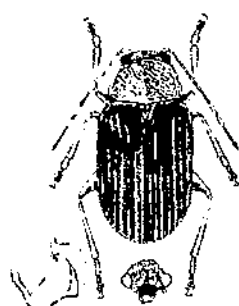
26. *C. hypochlora* Lefèvre
from Mexico
(specimen from Lefèvre collection)



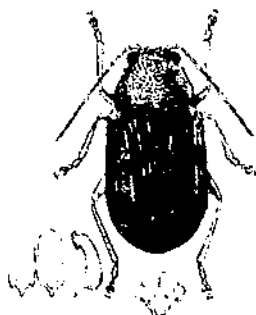
27. *Colaspis chapalemsi*, n. sp., type



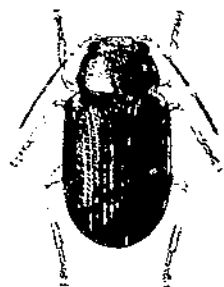
28. *C. zanthoplusia*, n. sp., type



29. *C. stenorachus*, n. sp., type



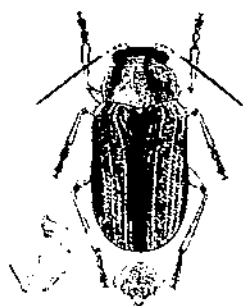
30. *C. freyi* Boehyne type
taedeagus from Bebedero, Costa Rica



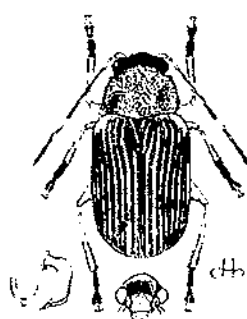
31. *C. freyi adscripta* Boehyne



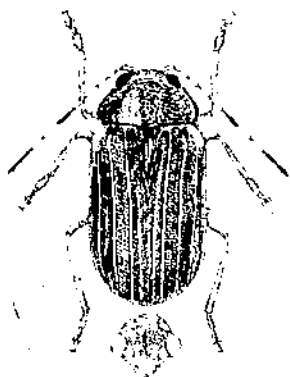
32. *C. kura*, n. sp., type



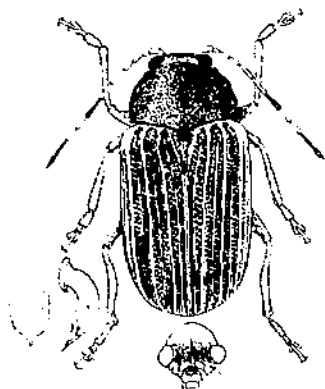
33. *C. saturalis* Lefèvre



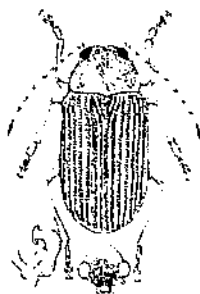
34. *C. chloropus*, n. sp., type



35. *Colaspis championi* Jacoby



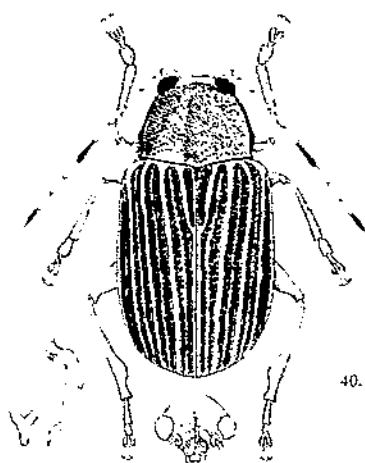
37. *C. similis*, n. sp.



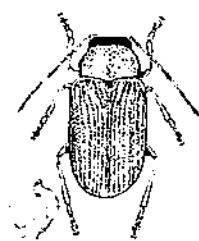
36. *C. hesperia* Blake



38. *C. viridiceps* Schaeffer



39. *C. confusa* Bowditch



40. *C. viridiceps australis*, n. sp., type

db

END