# Oklahoma Leaf Beetles of the Subfamilies Donaciinae, Criocerinae, Clytrinae, Chlamisinae, Eumolpinae, and Chrysomelinae (Chrysomelidae, Coleoptera)

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The leaf beetles form a conspicuous segment of the coleopterous fauna of Oklahoma. Because no taxonomic paper on the Chrysomelidae existed for the state, the present work was inaugurated. Of the 11 subfamilies found in Oklahoma, this paper covers only the Donacinae, Criocerinae, Clytrinae, Chlamisinae, Eumolpinae, and Chrysomelinae.

The chrysomelids are a large family of small or medium-sized beetles. They are generally host-specific and sometimes cause extensive damage to field crops and horticultural plants. However, the Donacinae, Clytrinae, and Chlamisinae are of little economic interest. The economically important species belong to the Criocerinae, Eumolpinae, and Chrysomelinae. The larvae and adults of these feed on the foliage of plants, except the larvae of Eumolpinae which are primarily root feeders.

Approximately 140 species of Chrysomelidae are known to occur in Oklahoma. This work includes 59 species, of which seven have been recorded by Hatch and Ortenburger (1930), and Hatch (1930). The remaining records have been obtained from collections in the Entomology Museum at Oklahoma State University, the Stovall Museum at the University of Oklahoma, and from literature (Blake, 1955; Blackwelder, 1939; Blackwelder and Blackwelder, 1948; Marx, 1957; and Leng, 1920). Also used were Blatchley (1910), Brown (1943, 1956), Clavareau (1913 a and b, 1914), Crotch (1873), Dillon and Dillon (1961), Horn (1892), Schaeffer (1933), and Wilcox (1954, 1957). Arnett's work (1960) has been of particular help in the identification of genera. Synonymy is not given in this paper since it can be found in the literature cited above.

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inc	ere thanks to Dr. Ruft Schneier who gave helpful advice and assure.
	KEY TO THE SUBFAMILIES OF CHRYSOMELIDAE
1.	Head not inflexed, mouth anterior2 Head inflexed, mouth turned caudad10
2.	Abdominal sternites two to four narrowed medially; pygidium exposed3 Abdominal sternites two to four not narrowed medially; pygidium not exposed5
8.	
	Prosternum without antennal grooves; body not contractile4
4.	Antennae serrate, dentate, or pectinate beyond third or fourth seg-
	Antennae filiform or, at most, clavateCryptocephalinae
5.	Pronotum without lateral margin 6 Pronotum with lateral margin 7
6.	Antennal insertions nearly approximate; first visible sternite as long as all others combined Donaciinae Antennal insertions separated by entire width of front; first visible abdominal sternite no longer than the second and third together Criocerinae
7.	Antennal insertions separated by entire front8 Antennal insertions nearly approximate9
8.	Third tarsal segment bilobed; procoxae roundEumolpinae Third tarsal segment not distinctly bilobed, entire; procoxae trans- versely ovalChrysomelinae
9.	Metafemora slender, adapted for walkingGalerucinae Metafemora swollen, adapted for jumpingAlticinae
LO.	Head exposed; pronotum and elytra without broadly expanded margins
	Head concealed; pronotum and elytra with broadly expanded mar- ginsCassidinae
	SUBFAMILY DONACHNAE
prot ilmi	Characteristics: Oblong; head slightly narrowed behind the eyes, multiply instructions almost approximate and extending to middle of elytra; horax narrower than elytra, almost as wide as head; tarsal clawsole; abdomen with first visible sternite as long as the remaining four other. Represented by a single genus, Donacia.
	KEY TO THE SPECIES OF Donacia
1.	Middle tibiae with apical, tooth-like projection on inner side near tibial spur
2.	Pronotum distinctly alutaceous, opaque
3.	Posterior femora reddish brown beneath, black area above
	Posterior femora black or metallic, reddish brown basally

4. Posterior femora gradually enlarged from base, each with blunt tooth

Donacia aequalis
Posterior femora abruptly clavate from middle, each with sharp tooth

Donacia texana

# Donacia piscatrix Lacordaire

Characteristics: oblong; color variable, bronze, green or brownish yellow, shining; antennae reddish yellow with second segment about one-half length of third; pronotum quadrate, each side with two tubercles, anterior one most prominent, disk finely, sparsely, and shallowly punctate; elvtral punctures coarse and in rows; length about 7.5 mm.

County records: McCurtain, Pushmataha.

## Donacia hypoleuca Lacordaire

Characteristics: This species differs from the foregoing species in that the color varies from dark to light brownish yellow; pronotum alutaceous; posterior tibiae when viewed from behind are evenly and strongly bowed; length about 8.5 mm.

County records: Adair, Delaware, Le Flore, Payne.

#### Donacia cincticornis Newman

Characteristics: This species differs from the foregoing species in that the color is brownish yellow and strongly shining, often with greenish tinge, head and thorax darker; antennae with tips of segments almost black; hind femora swollen and armed with one to three teeth; disk of elytra with two feeble transverse impressions; length about 9.5 mm.

County records: Not recorded from Oklahoma but likely to occur here.

#### Donacia aequalis Say

Characteristics: This species differs from the foregoing species in that the second and third joints of the antennae are equal; length about 6.0 mm.

County records: Not recorded from Oklahoma but likely to occur here.

#### Donacia texana Crotch

Characteristics: This species differs from the foregoing species in that the posterior femora are abruptly clavate from the middle; length about 7.0 mm.

County record: McCurtain.

# SUBFAMILY CRIOCERINAE

Characteristics: Oblong or elongate; antennae with eleven segments, inserted in front of eyes; prothorax much narrower than elytra and strongly constricted at middle; elytra with punctures in rows; first visible sternite no longer than second and third together. Represented by a single genus. Lema.

# KEY TO THE SPECIES OF Lema

1. Ninth elytral striae interrupted at middle \_\_\_\_\_\_Lema sexpunctata Ninth elytral striae not interrupted at middle \_\_\_\_\_\_2

2. Metasternum black Lema nigrovittata
Metasternum not black Lema trilineata

## Lema sexpunctata Olivier

Characteristics: Elongate; reddish yellow; antennae black; pronotum pale, nearly smooth with pleural areas of metathorax and legs (except base of femora) black; each elytron with black spots on humerus, middle, and near apex; underside usually pale (except metasternum); length about 5.0 mm.

County records: Alfalfa, Choctaw, Cleveland, McCurtain, Sequoyah.

#### Lema nigrovittata Guerin

Characteristics: This species differs from the foregoing species in that black lateral pronotal spots are present; elytra with black sutural and lateral vittae; venter black; length 5.5 mm.

County record: Payne.

#### Lema trilineata Olivier

Characteristics: This species differs from the foregoing species in that black spots on the pronotum are always on the disk; venter usually pale; length about 6.0 mm.

County records: Cherokee, Cleveland, Craig, McClain, Oklahoma, Payne.

#### SUBFAMILY CLYTRINAE

Characteristics: Shape variable, short subcylindrical; medium-sized; antennae short, widely separated, serrate; thorax margined on both sides; procoxae transverse, cavities closed behind; tarsal claws simple or toothed; elytra lobed laterally.

#### KEY TO SPECIES OF CLYTRINAE

1.	Elytra pale; sometimes reddish Elytra not pale or reddish	2
2.	Pronotum palePronotum black	3
	Sutural and lateral margins of elytra pale Sutural and lateral margins of elytra black	Anomoea laticlavia
4.	Color uniform black	Euryscopa subnigra 5
5.	Elytra with humeral red spots only Elytra with humeral and apical red spots .	Babia quadriguttata
6.	Color shining blue or greenish black	Saxinis omogera
7.	Labrum pale at sides	Coscinoptera axillaris Megalostomis subfasciata

## Anomoca mutabilis Lacordaire

Characteristics: Male and female often differ from each other in form, coloration and markings of elytra. Head more or less distinctly rugose in both sexes, either entirely red marked with black or entirely black; antennae black, joints five to eleven serrate; pronotum entirely

black or black with apical and lateral margins pale; elytra reddish with large submedian fascia, sutural, apical and lateral margins behind the submedian fascia black; body venter black, pubescence moderately long, dense, and white; length about 7.0 mm.

County record: Kiowa.

# Anomoea hogei Jacoby

Characteristics: This species differs from the foregoing species in that the entire upper surface is pale; first four joints of antennae pale, remainder black.

County records: Alfalfa, Atoka, Cleveland, Cotton, Craig, Dewey, Latimer, Le Flore, Oklahoma, Payne, Sequoyah.

#### Anomoea laticlavia Forester

Characteristics: This species differs from the foregoing species in that the elytra possess black fasciae or black sutural and lateral vittae.

County records: Alfalfa, Cleveland, Craig, Delaware, Le Flore, McClain, McCurtain, Oklahoma, Payne.

## Euryscopa subnigra Schaeffer

Characteristics: Color black; head densely punctate, pubescent, labrum pale; thorax densely punctate, pubescent; legs densely pubescent; elytra shining, glabrous, punctate; body beneath densely pubescent, punctate; length about 6.0 mm.

County records: Bryan, Cimarron, Comanche, Garvin, Oklahoma.

#### Babia quadriguttata Olivier

Characteristics: Color black, shining; thorax a little narrower than elytra, sparsely punctate; each elytron with humeral and apical reddishyellow spots; length about 3.0 mm.

County records: Dewey, Latimer, Muskogee, Oklahoma.

#### Saxinis omogera Lacordaire

Characteristics: Color shining blue or greenish black; thorax as wide as elytra, finely punctate; elytra with a reddish-yellow spot on humerus; body beneath finely pubescent; length about 3.5 mm.

County records: Cleveland, Comanche, McClain, McCurtain, Oklahoma, Payne.

#### Coscinoptera axillaris Le Conte

Characteristics: Head punctate, labrum pale at sides; legs sparsely pubescent; elytra with distinct humeral red spot, and pubescent; body beneath densely punctate, pubescent; length about 4.0 mm.

County records: Cleveland, McCurtain, Pushmataha.

#### Megalostomis subfasciata (Le Conte)

Characteristics: oblong, robust; color black; head usually densely punctate, pubescent, labrum black; pronotum moderately punctate, pubescent; elytra with basal third red, sparsely punctate, pubescent; body beneath densely pubescent; length about 4.0 mm.

County records: Not recorded from Oklahoma but likely to occur here.

#### SUBFAMILY CHLAMISINAE

Characteristics: Robust, ovate, cylindrical, with elevations or tubercles; head set into prothorax to the eyes; antennae widely separated, short, serrate, lying in grooves on sides of prosternum; prothorax sinuate at base, fitted closely to elytra; scutellum broad, truncate behind with a median tooth in front that fits into notch in base of thorax; pygidium exposed. Represented by a single species in Oklahoma.

## Exema pennsylvanica Pierce

Characteristics: Oblong, robust; black; head and antennae marked with yellow; anterior portion of pronotum with yellow area, disk with a few small yellow maculae, pronotum transverse, sides strongly narrowed apically; legs yellow, femora and tibiae may be blackish; elytra with a few yellow maculae, coarsely, densely punctate, with about ten coarse tubercules scattered over disk; length about 2.5 mm.

County record: Payne.

#### SUBFAMILY EUMOLPINAE

Characteristics: Oblong, convex, seldom rounded or oval; color usually metallic or iridescent; head slightly deflexed, visible from above; eyes more or less emarginate; antennae usually long, filiform, widely separated at base; procoxae globose, separated by prosternum, procoxal cavities closed behind, tarsi broad, third segment bilobed; elytra rounded apically, entire.

## KEY TO SPECIES OF EUMOLPINAE

1.	Anterior margin of prosternum arcuate forming postocular lobe
2.	Body above pubescent or scaly 3 Body above glabrous 5
3.	Pronotal margin usually dentate; protibiae toothed on inner side
4.	Vestiture of long, hair-like scalesGlyptoscelis albida Vestiture of broad, rather short scalesGlyptoscelis squamulata
5.	Ocular grooves very wide above eyes; color brown or dark metallic blue, green or bronze9  Ocular grooves narrow above eyes; color yellow, orange, or black, without green, blue or bronze luster6
6.	Pronotum deeply, coarsely punctate
7.	Elytra entirely black Paria thoracica Elytra not entirely black 8
8.	Elytra usually yellowish brown with black spot at base, one at apical third, and small one on margin behind humerusParia fragariae Elytra usually yellowish brown without spot on margin behind humerus, may be entirely black except for base and suture 'Paria quadriguttata
9.	Elytral punctures in distinct regular rowsTypophorus viridicyaneus Elytral punctures irregular or confusedChrysochus auratus
10.	Pronotum with distinct margins11 Pronotum without distinct margins18

11.	Color metallic green or bronze 12 Color not metallic green or bronze 16
12.	Front femur with minute tooth13 Front femur without minute tooth14
13.	Clypeus emarginateGraphops curtipennis Clypeus not emarginateGraphops pubescens
14.	Clypeus with rounded emargination
15.	Clypeus with deep angular emargination
16.	Pronotum transverse; profemora each with a small tooth; third antennal segment not longer than second Xanthonia villosula  Pronotum cylindrical; profemora unarmed; third antennal segment longer than second 17
17.	Piceous or nearly black Fidia longipes Reddish to brown Fidia viticida
18.	Head with distinct grooves above eyes
19.	Elytra dull yellow, each with two oblong dark spots
20.	Pronotal margin irregular or undulating 21 Pronotal margin regular and entire 24
21.	Prosternum narrow and contracted between coxae22 Prosternum wide, nearly parallel-sidedRhabdopterus picipes
<b>22</b> .	Color pale brown Colaspis brunnea Color not pale brown 23
23.	Color purplish black; thorax very closely, deeply and somewhat irregularly punctate
24.	Pronotum with basal marginal line25 Pronotum without basal marginal lineChrysodina globosa
25.	Clypeus broad between insertions of antennaeNodonota tristis Clypeus contracted between insertions of antennaeNodonota clypealis
	Myochrous denticollis (Say)
	Myochrous denticollis (Say)

Characteristics: Oblong, convex; color brown, bronze; pronotum wider than long with three blunt teeth on margin, protibiae strongly toothed below middle; elytra with rows of closely, deeply impressed punctures; vestiture of small scales white and brown intermixed; length about 4.5 mm.

County records: Cleveland, Coal, Comanche, Logan, McCurtain, Muskogee, Ottawa, Wagoner.

# Glyptoscelis albida Le Conte

Characteristics: Oblong, oval; grayish black; eyes deeply emarginate opposite base of antennae; pronotum distinctly broader than long,

not narrowed at base; elytra moderately punctate with long hair-like white or brownish pubescence; length about 8.0 mm.

County records: Oklahoma, Pawnee, Washington,

Glyptoscelis squamulata Crotch

Characteristics: This species differs from the foregoing species in that the pubescence is of broad white or brownish scales; length about 7.0 mm.

County records: Latimer, Oklahoma, Pawnee.

## Paria sexnotata (Say)

Characteristics: Oblong, short; yellowish red; head coarsely punctate, frontal suture not impressed; pronotum coarsely, deeply punctate; front and hind femur with distinct tooth, posterior tarsal claws with inner lobe short, one half length of outer lobe; elytra coarsely, deeply punctate, striate, each elytron with three black spots, two near center may be confluent or may be joined to basal spot; aedeagus with lateral apical lobes small with a distinct notch between lateral and median lobes; length about 1.5 mm.

County records: Cleveland, Comanche.

## Paria thoracica (Melsheimer)

Characteristics: This species differs from the foregoing species in that the color is entirely black; head and pronotum may be yellowish, punctation fine or absent; front femur without tooth, posterior claws with inner lobe long, three-quarters length of outer lobe; elytra moderately punctate, entirely black; aedeagus with lateral lobes large, nearly as long as median lobe, median lobe moderately broad; length about 3.5 mm.

County records: Cleveland, Comanche, McClain.

# Paria fragariae Wilcox

Characteristics: This species differs from the foregoing species in that the color is usually yellowish brown; front and hind femora each with small tooth, posterior claws with inner lobe short, one-half length of outer lobe; each elytron usually with black spot at base, one on the apical third and a small spot on margin behind humerus (may lack spots completely); aedeagus long, narrowed at apex, median lobe long, lateral lobes reduced; length about 3.0 mm.

County record: Cleveland.

## Paria quadriguttata Le Conte

Characteristics: This species differs from the foregoing species in that the elytral punctures are fine, close, striae not impressed, pattern of elytra quite variable, may be entirely black with base and suture yellow, may be yellowish brown with basal spot and two spots at apical third, spot on margin behind humerus lacking; aedeagus long, narrower at apex, median lobe broad, lateral apical lobes very much reduced; length about 4.0 mm.

County records: Oklahoma, Payne.

# Typophorus viridicyaneus (Crotch)

Characteristics: Oblong, oval; bluish green; antennae red, second segment distinctly shorter than third; elytra punctate, striate; length about 7.0 mm.

County records: Adair, Cleveland, Craig, Delaware, Okmulgee, Washington.

## Chrysochus quratus (Fabricius)

Characteristics: Oblong, convex; brilliant metallic green; head and pronotum with sparse, coarse, deep punctures intermingled with fine punctures; elytra finely, irregularly punctate; length about 9.5 mm.

County records: Adair, Beaver, Cherokee, Cleveland, Comanche, Craig, Love, Marshall, McCurtain, McIntosh, Oklahoma, Pawnee, Payne, Pittsburg, Washington, Woods.

## Graphops curtipennis (Melsheimer)

Characteristics: Oblong, oval; usually black with metallic bronze luster or copper; eyes prominent, clypeus slightly emarginate; pronotum with punctures in transverse lines forming wrinkles, profemur with small inconspicuous tooth; pubescence usually in lines converging towards suture at apex; body with short inconspicuous white pubescence; length about 3.0 mm.

County record: Beckham.

## Graphops pubescens (Melsheimer)

Characteristics: This species differs from the foregoing species in that the clypeus is not emarginate; pronotum lacks transverse wrinkles formed by punctures, lightly pubescent; elytra with punctation not coarse, basal half of elytra with finer punctures in intervals, towards apex punctation becomes faint; length about 4.0 mm.

County records: Cleveland, Pawnee.

#### Graphops marcassita (Crotch)

Characteristics: This species differs from the foregoing species in that the emargination of clypeus is rounded; profemur without tooth; length about 3.0 mm.

County records: Not recorded from Oklahoma but likely to occur here.

## Graphops simplex Le Conte

Characteristics: This species differs from the foregoing species in that the color is usually metallic green; clypeus has deep angular emargination.

County records: Not recorded from Oklahoma but likely to occur here.

#### Graphops smaragdula (Le Conte)

Characteristics: This species differs from the foregoing species in that the color above is metallic green to blue-green and bronzish or copperish beneath with the legs also bronzish; clypeus with round emargination; length about 4.0 mm.

County record: Delaware.

<sup>&#</sup>x27;The tooth is located antero-ventrally toward the apex of the femur and is very easily overlooked beause of its location and inconspicuousness. We have found that observation of the outline of the femur against a light background helps to make its detection easier.

#### Xanthonia villosula (Melsheimer)

Characteristics: Oblong, pale yellow or darker; head usually darker than elytra, antennae dull yellow; pronotum finely and densely punctate on disk, usually darker than elytra, legs dull yellow; elytra with closeset rows of fine punctures, erect hairs in single row on each elytral interval; body covered with reddish-yellow pubescence; length about 3.0 mm.

County records: Adair, McCurtain.

Fidia longipes (Melsheimer)

Characteristics: Oblong; piceous or nearly black; base of antennae pale; thorax narrower than elytra and longer than wide; tibiae and base of femora pale; clytra densely punctured; body densely clothed with gray pubescence; length about 3.5 mm.

County record: Adair.

#### Fidia viticida Walsh

Characteristics: This species differs from the foregoing species in that the color is dull reddish brown and the pubescence is grayish yellow.

County records: Caddo, Choctaw, Delaware, Le Flore, Major, Pawnee.

Metachroma interrupta (Say)

Characteristics: Oblong; pale reddish brown; head sparsely punctate, distinct frontal impression; pronotum wider than long, sparsely punctate; each elytron with humeral sutural line and two oblong discal spots, piceous; length about 6.0 mm.

County record: Oklahoma.

Metachroma angustulum Crotch

Characteristics: This species differs from the foregoing species in that the elytra do not have spots.

County record: Cleveland.

Rhabdopterus picipes (Olivier)

Characteristics: Oblong, convex; dark brown to black, shining; head coarsely, sparsely punctate; antennae reddish yellow with apex often brown; pronotum wider than long, finely punctate; legs yellow; elytra coarsely and somewhat irregularly punctate; length about 5.0 mm.

County records: Bryan, Cherokee, Cleveland, McCurtain, Murray.

Colaspis brunnea (Fabricius)

Characteristics: Oblong, oval; yellowish and not shining; head not coarsely punctate, distinct medial frontal impression present; pronotum not coarsely, deeply punctate; elytra with irregular rows of coarse, deep punctures; length about 5.0 mm.

County records: Adair, Cherokee, Delaware, Latimer, Osage, Payne.

Colaspis nigrocyanea Crotch

Characteristics: This species differs from the foregoing species in that the color is purplish black; head and pronotum coarsely and deeply punctate.

County record: Klowa.

## Colaspis favosa Say

Characteristics: This species differ from the foregoing species in that the color is metallic green.

County records: Cleveland, Comanche.

## Chrysodina globosa (Olivier)

Characteristics: Ovate, convex; dark blue or black, shining; antennae pale; pronotum with apex only half as wide as base, finely punctate; elytra finely, evenly and densely punctate; length about 3.0 mm.

County records: Cleveland, Comanche, Grady, Murray.

#### Nodonota tristis (Olivier)

Characteristics: Ovate, convex; bluish or bluish green, shining; clypeus broad between antennae, antennae pale at base, outer joints piceous; elytra with irregular, coarse punctation; length about 3.5 mm.

County records: Delaware, Kiowa, Le Flore, McIntosh, Ottawa, Pawnee, Payne, Sequoyah.

## Nodonota clypealis Horn

Characteristics: This species differs from the foregoing species in that the clypeus is contracted between the antennal insertions; punctation less distinct and more sparse.

County record: McCurtain.

#### SUBFAMILY CHRYSOMELINAE

Characteristics: Oval, convex; usually brightly colored; head inserted into prothorax to eyes, antennae widely separated at base, apical segments somewhat enlarged, eyes slightly emarginate; prothorax with side margins well defined, procoxae transverse, widely separated, third tarsal segment entire instead of bilobed; elytra convex, covering entire abdomen.

#### KEY TO THE SPECIES OF CHRYSOMELINAE

1.	Maxillary palpi with apical segment cylindrical or oval, attenuate toward apex; third tarsal segment usually bilobed or emarginate sometimes simple
	Maxillary palpi with apical segment subquadrangular or dilated, broadly truncate at apex; third tarsal segment entire or scarcely emarginate
2.	Claws connate, parallel and contiguous3 Claws divergent or at least separated at base6
3.	Pronotum brown with anterior angles paleZygogramma exclamationis
	Pronotum entirely brown4
4.	First and second interstices brown, forming a sutural vitta
	First and second interstices not forming a sutural vitta
5.	Second vitta twice interrupted, fourth vitta represented by a spot
	Second vitta once interrupted may be united with third vitta at apex, fourth vitta united with third at baseZygogramma disrupta
6.	Maxillary palpi with apical segment shorter than preceding segment

	Maxillary palpi with apical segment not shorter than preceding one
7.	Mesosternum forming blunt tubercle between mesocoxae; profemora of male strongly toothedLabidomera clivicollis Mesosternum without tubercle between mesocoxae; profemora of male simple9
8.	Elytra vittate Leptinotarsa decemlineata Elytra uniform in color Leptinotarsa haldmani
9.	Sides of pronotum not thickened; elytra dark without markings, margins may be paleChrysolina auripennis Sides of pronotum thickened; elytra pale with dark markings10
10.	Elytra with regular vittae
11.	Pronotum brown with pale margins
12.	Thorax at least partly paleCalligrapha multipunctata bigsbyana Thorax entirely dark
18.	Elytra with spots
14.	Each elytron with a pattern of seven dark spots of which two are median, never elongate, often joined together and to the suture to produce irregular transverse band; rarely entirely pale, sometimes with only the two median spots present on each elytron, may be more or less fused
15.	

#### Zygogramma exclamationis (Fabricius)

Characteristics: Oval; brown; pronotum brown with anterior angles pale; elytra pale with vittae; length about 8.0 mm.

County records: Beaver, Canadian, Cimarron, Cleveland, Comanche, Craig, Harper, Jackson, Kay, McCurtain, Noble, Osage, Payne, Pittsburg, Pontotoc, Sequoyah, Stephens, Washington, Woodward.

## Zygogramma suturalis (Fabricius)

Characteristics: This species differs from the foregoing species in that the pronotum is entirely brown; elytra with first and second interstices brown, forming sutural vitta, length about 6.0 mm.

County records: Cleveland, Comanche, Craig, Dewey, Harper, Noble, Oklahoma, Okmulgee, Payne, Pawnee, Sequoyah.

## Zygogramma heterotheca Linell

Characteristics: This species differs from the foregoing species in that the second vitta is twice interrupted; length about 5.0 mm.

County records: Alfalfa, Canadian, Cleveland, Grady, Grant, Hughes, McCurtain, Osage, Payne, Washita.

## Zygogramma disrupta Rogers

Characteristics: This species differ from the foregoing species in that the second vitta is interrupted once; length about 6.5 mm.

County records: Alfalfa, Cleveland, Cimarron, Comanche, Grady, Grant, Harper, McClain, Oklahoma, Payne, Texas, Woodward.

## Labidomera clivicollis (Kirby)

Characteristics: Oval, convex; bluish black; pronotum about three times as wide as long; elytral punctures fine, arranged in irregular double rows; length about 9.0 mm.

County records: Cleveland, Payne.

# Leptinotarsa decemlineata (Say)

Characteristics: Broadly oblong, convex; dull yellow; elytral vittae delimited by irregular rows of punctures; length about 8.0 mm.

County records: Alfalfa, Beckham, Caddo, Carter, Cleveland, Cimarron, Coal, Comanche, Cotton, Craig, Delaware, Ellis, Grady, Harmon, Harper, Johnson, Latimer, Le Flore, Lincoln, McCurtain, McIntosh, Murray, Noble, Oklahoma, Osage, Ottawa, Pawnee, Payne, Pottawatomie, Sequoyah, Washington, Woods, Woodward.

## Leptinotarsa haldmani (Rogers)

Characteristics: This species differs from the foregoing species in that the color is uniform blue or green; elytra lacking vittae.

County records: Payne.

## Chrysolina auripennis (Say)

Characteristics: Oblong oval, convex; head, pronotum and appendages deep blue or violet with elytra varying from cupreous to bright green; head sparsely punctate; pronotum almost twice as wide as long, lateral grooves deep with coarse punctures at bottom of groove, disk finely, sparsely punctate; elytra coarsely, irregularly punctured; length about 8.0 mm.

County records: Beckham, Choctaw, Comanche, Garfield, Greer, Harmon, Kay, McCurtain, Payne, Roger Mills, Tillman.

## Calligrapha praecelsis (Rogers)

Characteristics: Broadly oval, convex; brown with pronotal apical and lateral margins yellowish white, with suture and broad discal stripe brown; length about 7.0 mm.

County record: Osage.

#### Calligrapha bidenticola Brown

Characteristics: This species differs from the foregoing species in that the entire pronotum is brown; length about 6.5 mm.

County records: Dewey, McIntosh, Okmulgee, Ottawa, Pittsburg.

#### Calligrapha multipunctata bigsbyana (Kirby)

Characteristics: This species differs from the foregoing species in that the color is green with the antennae and legs reddish, margins of pronotum and most of elytra pale yellow usually with poorly defined vitatae, length about 7.0 mm.

County records: Cleveland, Oklahoma, Sequoyah.

Calligrapha scalaris (Leconte)

Characteristics: This species differs from the foregoing species in that the pronotum is entirely green; length about 8.5 mm.

County records: Garfield, Kay, Payne, Woodward.

# Gastrophysa cyanea Melsheimer

Characteristics: Oblong oval, convex; dark blue to violet; head and pronotum finely, moderately punctate; elytra finely, densely punctate; length about 5.0 mm.

County records: Carter, Cleveland, Comanche, Grady, Mayes, Mc-Intosh. Murray, Payne, Sequoyah.

## Chrysomela scripta Fabricius

Characteristics: Oblong oval; dull reddish to yellow, dark areas with greenish reflection; pronotum dark, very finely punctate with margins yellow, coarsely and sparsely punctate; elytra coarsely, moderately punctate with each containing three median elongated spots; length about 7.0 mm.

County records: Alfalfa, Bryan, Cherokee, Cleveland, Grady, Mc-Intosh, Payne, Pushmataha, Washington.

# Chrysomela interrupta Fabricius

Characteristics: This species differs from the foregoing species in that each elytron contains two median spots, not elongated, usually fused; length about 8.5 mm.

County records: Canadian, Cleveland, Comanche, Ellis, Grady, Greer, Kiowa, Lincoln, McClain, Murray, Oklahoma, Osage, Payne, Woodward.

#### Chrysomela knabi Brown

Characteristics: This species differs from the foregoing species in that each elytron contains only two median spots, basal and posterior spots lacking; length about 7.5 mm.

County records: Canadian, Carter, Cleveland, Oklahoma.

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