

Revision of the species of CHLAENIUS of the United States.

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During the present year (1876), there has appeared an elaborate monograph of the species of *Chlaenius* by Baron Chaudoir, in the *Annali del Mus. Civ. di St. Nat. di Genova*, remarkable for its accuracy, perspicuity and evidences of great industry and analytical power. With the exception of two all our species were known in nature to him and these have been very accurately placed in his tables from the descriptions alone, and when it is considered that more than four hundred species have been tabulated, the magnitude of the labor becomes apparent.

There have been many new characters discovered and made use of in the definition of groups and other divisions, so that *Chlaenius* from being one of the more difficult genera for study, has been rendered as easy as it is possible to make one of such magnitude.

From among our species Chaudoir has removed *C. lithophilus*, Say, founding upon it a new genus BRACHYLOBUS, characterized especially by a peculiar conformation of mentum which will be spoken of hereafter.

The true *Chlaenius* are divided into three groups as follows:

I.—Abdomen at sides feebly or not at all punctulate, at middle smooth, glabrous.

II.—Abdomen punctulate, pubescent, middle usually smooth.

III.—Abdomen punctulate over the entire surface, pubescent.

The first group contains *tomentosus* and *cumatilis*, the second *prasinus*, *cordicollis*, *leucoscelis* and *solitarius*, while the third contains the remainder of the species, divided into smaller groups by characters of greater or lesser importance.

It cannot be expected that Chaudoir's monograph will reach the numerous students of our own country, and it has seemed to me desirable that the results of his study should be more widely known, and presented with such modifications as might seem desirable in reviewing the more limited number of species in our fauna.

Having about one-tenth of the entire number in our fauna it might be inferred that their arrangement would present less difficulty than the whole number, this must be my apology for adopting an arrangement entirely different from Chaudoir's, even after having spoken of

the latter in the highest possible terms. My reason for seeking another method is, that while species in our fauna which are so evidently allied in many of their characters are widely separated, (e. g., *purpuricollis* and *niger*), others very dissimilar are placed in close proximity, (e. g., *tomentosus* and *cumatilis*).

Group III. will be seen to be composed of rather heterogeneous material. These remarks must not be interpreted as criticisms, except in the mildest sense, and it is probable that any method of classification based on a fauna as limited as our own will prove inadequate in the larger field.

Having become convinced that our species in which the thorax at base was as wide as the elytra, should be placed in proximity in any natural arrangement, the difficulty arose in finding some natural character which would associate them. This I at last found in the middle tibiæ of the males. In more than one-half of our species the males have a pubescent space of greater or less extent at the distal end of the middle tibiæ, which is usually on the outer edge sometimes in the front, the other species have glabrous tibiæ with merely the terminal fringe of fine spinules. With this as a starting point the divisions based on the punctuation of the abdomen and other characters made use of by Chaudoir can be more readily brought in.

The dilatation of the palpi in *purpuricollis* and *tomentosus*, seemed to me too important a character to lose sight of, and although no mention of it is made in the table, it should be given its proper weight in influencing the relative position of the species possessing it.

In our fauna *niger* is the central form of a group of species with a peculiar thoracic sculpture, formed of large punctures arranged at the sides, along the median line, and in and continuing the basal impression, the intervening spaces being smooth and more or less elevated. *C. tomentosus* even, preserves a trace of this sculpture.

C. cumatilis seems to associate more naturally with the *cordicollis* group, and would appear much out of place in our series near *tomentosus*.

Our other species possess no characters worthy of special comment, any peculiarities will be mentioned either in the table or the accompanying notes. Detailed diagnoses will not be given except where new species are described. In the arrangement of a cabinet it would probably be more natural to reverse the order of the table, this moreover would not greatly disturb the present position of most of the species.

As there are many species already well known to all collectors, these will be taken as the standards in speaking of color, so that the idea may be better conveyed.

The lateral margin of the elytra and basal line unite at the humerus, forming either a distinct angle or a regular curve. To avoid repetition of description, the expression in the former case will be "basal line angulate at humerus," and "arcuate at humerus" in the latter. The anterior femur of the male may have near the base a feeble tooth, or it may be subangulate, that is, suddenly narrowed, or it may be entirely simple, being gradually narrowed from the thickest portion toward either extremity. These expressions seem not to need any further explanation.

A.—Middle tibiæ ♂ without pubescent space at tip. Third joint of antennæ not longer than the fourth, (except in 1 and 2).

Abdomen impunctured and glabrous.

Thorax narrower at base than the elytra, sides distinctly sinuate, basal impressions deep, surface irregularly punctured.....1. **validus.**

Thorax as broad at base as the elytra, sides not sinuate, basal impressions very feeble, surface densely punctured.....2. **tomentosus.**

Abdomen sparsely punctured and pubescent over the entire surface.....1.

1.—Prosternum not margined at tip, thorax not sinuate.....2.

Prosternum margined at tip, thorax distinctly sinuate.....3.

2.—Thorax with coarse punctures very irregularly disposed. Legs black... 4.

Thorax more finely and densely punctured, subopaque. Legs red.....5.

4.—Prosternum punctured between the coxæ, elytra coarsely and rather densely punctured. Thorax as wide as base of elytra.....6.

Prosternum impunctured, elytra finely punctured, thorax narrower.....7.

6.—Marginal line of elytra forming an angle with the basal line, margin of thorax not thickened.....3. **purpuricollis.**

Marginal line of elytra regularly curved at base, margin of thorax thickened, especially toward the base.

Elytral intervals alternately more convex, but similarly punctured.

4. **alternatus.**

Elytral intervals equal.....5. **niger.**

Striæ of elytra broken into short lines.....6. **interruptus.**

7.—Head greenish, thorax feebly bronzed, body and elytra black.

7. **harpalinus.**

5.—Thorax narrower at apex than base, and with narrow red margin.

8. **impunctifrons.**

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3.—Thorax with impunctured spaces or unequally punctured.

Mandibles elongate, deflexed; thorax with very coarse, deeply impressed but sparsely placed punctures.....9. **maxillosus.**

Mandibles normal in form.

Epipleuræ pale, thorax distinctly sinuate.....10. **circumcinctus.**

Epipleuræ concolorous, thorax not sinuate.....11. **texanus.**

Thorax equally punctured. Epipleuræ dark.....8.

- 8.—Elytral intervals finely muricate. Prothoracic episterna coarsely punctured.....12. **pennsylvanicus.**
 Elytral intervals finely and sparsely punctured and not distinctly impressed.....9.
 9.—Prothoracic episterna coarsely punctured.....10.
 Prothoracic episterna very obsoletely punctured.....11.
 10.—Head and thorax green, varying to blue, shining.
 Labrum emarginate.
 Body above green, elytra rather densely punctulate.
 13. **floridanus.**
 Body above bicolored, elytra very obsoletely and sparsely punctulate.
 14. **brevilabris.**
 Labrum truncate.....15. **tricolor.**
 Head and thorax coppery bronze, thorax subopaque.....16. **nemoralis.**
 11.—Thorax shining, punctures coarse and numerous.....12.
 Thorax opaque, punctures fine and very sparse.....13.
 12.—Body above (head and thorax), metallic green, legs pale.
 Thorax with feeble but evident sinuation. Labrum emarginate.
 17. **glaucus.**
 Thorax distinctly sinuate and narrower. Labrum truncate.
 18. **simillimus.**
 Thorax not sinuate. Labrum truncate.....19. **nebraskensis.**
 Body above black or very slightly blue. Legs usually black.
 20. **variabilipes.**
 13.—Thorax not sinuate, base evidently broader than apex. Labrum truncate.....21. **vafer.**
 Thorax sinuate, hind angles subacute, punctures more evident. Labrum feebly emarginate. Color above green.....22. **flaccidus.**
 Thorax distinctly sinuate, base not broader than apex. Labrum emarginate.....23. **obsoletus.**

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- B.—Middle tibiæ ♂ with a pubescent space near the tip. Third joint of antennæ longer than the fourth.
 Prothoracic epipleuræ very narrow and nearly vertical, thorax obtusely margined.....17.
 Prothoracic epipleuræ normal, oblique or nearly horizontal, thorax acutely margined.....1.
 1.—Abdomen either smooth at middle or over its entire surface.....2.
 Abdomen sparsely punctured at middle and more densely at sides.....3.
 2.—Abdomen punctured at sides only. Anterior femora of ♂ subangulate at base.....4.
 Abdomen devoid of punctures.....5.
 4.—Prosternum not margined at tip, feebly punctured or smooth in front...6.
 Prosternum margined at tip, coarsely punctured in front.....7.
 6.—Color bright green, shining.....24. **solitarius.**
 Color dark blue, thorax subopaque, elytra opaque.....25. **leucoscelis.**
 7.—Color green, last ventral segment nearly entirely testaceous.
 26. **prasinus.**
 5.—Prosternum feebly margined at sides of tip; episterna with coarse punctures; color violet blue, opaque.....27. **cumatilis.**

- 3.—Metasternal episterna long, outer side longer than the anterior..... 8.
 Metasternal episterna short, outer side shorter than the anterior..... 9.
 9.—Thorax scarcely narrower at base than the elytra, sides not sinuate.....10.
 Thorax narrower at base than the elytra, sides sinuate.....11.
 10.—Body above green (as in *sericeus*); legs entirely pale....28. **augustus**.
 Body above bluish black; tibiæ and tarsi black.....29. **viduus**.
 11.—Male with anterior femora subangulate at base.
 Thorax as long as wide, sides distinctly sinuate.....30. **æstivus**.
 Thorax wider than long, sides not sinuate.....31. **platyderus**.
 Male with anterior femora simple.....32. **diffinis**.
 8.—Male with anterior femora toothed at base.....33. **laticollis**.
 Male with anterior femora suddenly narrower at base..... 12.
 Male with simple femora..... 13.
 13.—Legs black..... 34. **orbis**.
 Legs testaceous..... 14.
 14.—Thorax very densely punctate..... 15.
 Thorax very sparsely coarsely punctate.
 Prothorax beneath and abdomen very sparsely punctate...35. **cursor**.
 Prothorax densely and coarsely punctured, abdomen moderately punctate.....36. **Chaudoiri**.
 15.—Thorax strongly sinuate, hind angles rectangular, base not broader than apex..... 16.
 Thorax very distinctly broader at base than apex, moderately or not sinuate.
 Smaller species, (.52—.66 inch). Color green to blue, legs pale.
 Larger, (.84—.90 inch). Color blackish, tarsi piceous.
 37. **sericeus**.
 38. **fuscicornis**.
 12.—Thorax distinctly sinuate. Color and size of *fuscicornis*.
 39. **erythropus**.
 16.—Color black with tinge of blue, elytra very finely striate.
 40. **viridifrons**.
 17.—Body above unicolorous, thorax feebly narrowed at base.
 41. **herbaceus**.
 Elytra with apical third rufous, thorax coarctate at base.
 42. **ruficauda**.

1. **C. validus**, Chev.—Body beneath black, above green. Head brilliant green, with few minute punctures, a deep wrinkled groove on each side in front, labrum truncate, antennæ rufous. Thorax wider than long, sides moderately arcuate in front, sinuate posteriorly, hind angles rectangular but not prominent, disc moderately convex, moderately densely punctured along the base and with coarser punctures along the median line, others arranged in two irregular rows from each basal impression, a few along the lateral margin and the middle of the apex; basal impressions deep, apical transverse impression very faint. Elytra broader at base than the thorax, basal line angulate at humeri, striæ moderately deep at base, gradually finer toward apex, punctures more evident at base, intervals finely but not densely punctured, sparsely pubescent. Prosternum not margined, smooth except along the anterior and lateral margins where there are coarse punctures, episterna smooth with a few coarse and deep punctures near the suture. Metasternal episterna long, smooth

with a very few (six to eight), large punctures. Abdomen entirely smooth. Length .60—.72 inch; 15—18 mm.

The head is entirely bright green, thorax with cupreous tinge, elytra olive green, opaque, extreme margin shining. The third joint of the antennæ is longer than the fourth and the palpi distinctly dilated.

I have seen two specimens of this species, one from Arizona, the other Mexican. The description was made from the former, which is brighter in color than the other. The description therefore differs slightly from that by Chaudoir.

2. **C. tomentosus**, (Say)—Color black, shining beneath, subopaque and feebly bronzed above. Head nearly smooth, a few punctures over each eye. Palpi elongate triangular, truncate at tip. Antennæ black, two basal joints pale, third joint longer than the fourth. Thorax gradually wider from apex to base, hind angles rectangular, base as broad as the elytra; disc with feeble basal impressions, densely punctured at sides and base, middle more coarsely punctured and with vaguely defined smooth spaces. Basal line of elytra angulate at humeri, striæ moderately deep, punctures rather coarse but not serrate, intervals feebly convex, finely not densely punctulate and pubescent. Prosternum margined at tip and longitudinally impressed in front ♂; episterna with coarse punctures in front. Metasternal episterna coarsely punctured, elongate, margined. Abdomen almost entirely smooth, not pubescent. Length .52—.60 inch; 13—15 mm.

Anterior femora simple in the male.

Occurs commonly, nearly everywhere east of the Rocky Mountains.

3. **C. purpuricollis**, Randall.—Color black beneath, dark violet blue above. Form similar to *tomentosus* but much smaller. Antennæ black, basal joint pale; palpi distinctly dilated and truncate at tip. Thorax gradually broader from base to apex, hind angles obtuse; surface coarsely punctured, punctures arranged at the sides, basal impressions and median line, intervening spaces more convex and smoother. Elytra not broader at base than thorax, basal line angulate at humeri, surface with fine striæ finely and distantly punctured, intervals with moderately dense, rather coarse, simple punctures. Prosternum sparsely punctured in front, episterna sparsely punctured. Metasternal episterna elongate, surface cribrate and with marginal impressed line. Abdomen sparsely punctured over the entire surface and sparsely pubescent. Length .36 inch; 9 mm.

Anterior femora of male simple. Palpi similar in the sexes, the labial slightly more dilated than the maxillary.

I cannot understand why Chaudoir has compared this species with *augustus*, as they seem to have very little in common.

Occurs from New York westward to Kansas, but rare.

4. **C. alternatus**, Horn.

I have very little to add to the original description. The form is exactly that of *niger*, but the thorax is less arcuate on the sides, the

sculpture of the thorax does not however differ. The elytral intervals are alternately more convex, and the entire surface is covered with short black pubescence as in *niger*. The striae are replaced by large vague punctures at middle, and at the sides are broken into short lines, basal margin arcuate at humeri. Prosternum very sparsely punctured, episterna smooth. Metasternal episterna long, sparsely punctured and margined. Abdomen as in *purpuricollis*. Length .50 inch; 12.5 mm.

Anterior femora of male simple. Labrum truncate.

One specimen ♂ from Saskatchewan region, others are in the cabinet of the British Museum.

5. **C. niger**, Randall.—Black rarely with a faint bronze tinge. Head smooth, a faint vertical puncture. Labrum emarginate. Antennae black. Palpi slender. Thorax broader than long, apex narrower, sides regularly arcuate; margin with a thickened edge, base slightly narrowed, hind angles obtuse, surface with coarse punctures at the sides and base, along the median line, and in continuation of the basal impressions, intervening spaces smooth and moderately convex. Elytra striate, striae finely punctured, intervals moderately convex, moderately densely punctured, sparsely clothed with short brownish pubescence with yellowish hairs very sparsely intermixed. Prothorax beneath sparsely punctured. Metasternal episterna sparsely punctured, margined. Abdomen sparsely punctured and pubescent. Length .50 inch; 12.5 mm.

Anterior femora of male simple.

Occurs from Canada to Louisiana and Florida.

6. **C. interruptus**, n. sp.—Body black above and beneath. Head as in *niger*, labrum subtruncate, antennae black. Thorax nearly twice as wide as long, very little broader at base than apex, sides moderately arcuate, margin slightly thickened, disc moderately convex, basal impressions shallower than in *niger*, median line moderately impressed, surface punctured as in *niger*. Elytra relatively broader than in *niger*, striae broken into lines of varying length, intervals punctured as in *niger* but with shorter less conspicuous pubescence. Body beneath entirely as in *niger*. Length .46 inch; 11.5 mm.

The upper surface is rather less shining than in *niger* and the form rather more robust, the labrum much less emarginate, and the thorax narrower at base and the sides much less depressed. The short lines into which the striae are broken, are deeply impressed and the intervals between the rows convex.

I was at one time disposed to consider this as a deformed *niger*, but Mr. Ulke assures me that four specimens exactly alike have been taken, two of them in copulation.

Occurs in Washington County, Oregon. For the unique in my cabinet, I am indebted to Mr. H. Ulke, who kindly divided his pair with me.

7. **C. harpalinus**, Esch.—Body above and beneath black, head metallic green, thorax bronzed. Head minutely punctulate, labrum truncate, antennæ entirely black, palpi slender. Thorax quadrate, broader than long, sides moderately arcuate, surface punctured in a manner similar to *niger* but much less densely and deeply. Basal line of elytra arcuate at humeri, striæ moderately deep, indistinctly punctured, intervals feebly convex, moderately densely and rather finely punctured, sparsely clothed with short black pubescence. Prosternum nearly smooth in front, episterna obsoletely punctured. Metasternal episterna long, sparsely punctured and margined. Abdomen as in *niger*. Length .44 inch; 11 mm.

Anterior femora simple in the male.

Chaudoir describes the form of the thorax somewhat differently, but the form varies moderately and I have thought it better to use more general terms.

Occurs on the Pacific coast from Vancouver Island to San José, California.

8. **C. impunctifrons**, Say.—Body black, head brilliant green, thorax greenish, subopaque, elytra black, opaque, legs rufo-testaceous. Head nearly smooth, labrum truncate, antennæ rufo-testaceous. Thorax broader than long, base slightly broader than apex, sides moderately arcuate with narrow red edge, hind angles obtuse, surface subopaque, moderately densely but finely punctured, sparsely pubescent, median and basal lines finely impressed. Elytra with basal line very feebly subangulate at humeri, striæ rather deep, moderately punctured, intervals flat, finely and moderately densely punctulate sparsely clothed with short pale pubescence. Prosternum moderately coarsely punctured, episterna more finely. Metasternal episterna elongate, sparsely punctured, margined. Abdomen as in *niger*. Length .52—.62 inch; 13—15.5 mm.

Anterior femora of male simple.

This species is peculiar in having a very flat thorax, of a form not very different however, from *niger*. It must be considered out of line in any attempt at a linear arrangement of our species.

Occurs from Canada to Texas.

9. **C. maxillosus**, n. sp.—Body beneath piceous, legs pale, above black with slight violet tinge. Head smooth, with slightly bluish tinge, labrum truncate, mandibles elongate, feebly arcuate, deflexed; antennæ rufous, three basal joints paler, third joint very little longer than the fourth. Thorax broader than long, base wider than apex, sides regularly arcuate, not sinuate, disc moderately convex, coarsely, deeply and very irregularly punctured, intervals smooth. Elytra oblong oval, basal line arcuate at humeri, deeply striate, striæ indistinctly punctured except at base, intervals convex, very sparsely and irregularly punctate, sparsely pubescent. Prosternum margined at tip, coarsely punctured, episterna coarsely punctured. Metasternal episterna coarsely punctured. Abdomen as in *niger*. Length .40 inch; 10 mm.

This species is peculiar in many respects. The mandibles are more elongate and less arcuate than in any species in our fauna, resembling

those of *Anomoglossus* but even longer, the ligula more exsert but normally formed. The mentum tooth does not differ from that of many others, being rather broad at base and slightly impressed at tip. The palpi do not differ from *pensylvanicus* and its allies. The entire oral apparatus seems to be more elongated, but beyond this no generic character is presented. The elytral sculpture is also entirely unlike any of our others. The punctures are distributed nearer the sides of the intervals, and a feeble attempt appears in the inner intervals at a biseriate arrangement.

I have before me two females collected by Messrs. Hubbard and Schwartz, at Lake Harney and Haulover, Florida. The males might give another generic determination.

10. **C. circumcinctus**, Say.—Body beneath black, above green, elytra darker, legs rufo-testaceous. Head minutely punctulate, labrum truncate, palpi slender, antennæ brownish, three basal joints pale. Thorax broader than long, margin narrowly rufous, sides arcuate in front, feebly sinuate posteriorly, hind angles acute, not prominent, surface coarsely but sparsely punctured at the sides, base, along the median line and in continuation of the basal impressions, intervening spaces smooth and more convex. Elytra feebly shining, basal line feebly subangulate at humeri, margin narrowly rufous, epipleuræ pale; surface with finely punctured striæ, intervals flat, finely and not densely punctulate and with rufous pubescence. Prosternum punctured in front, margined at tip, episterna sparsely obsoletely punctate. Metasternal episterna long, margined, sparsely punctate. Abdomen punctured as in *niger*, bordered with rufous at the tip and sides posteriorly. Length .40—.44 inch; 10—11 mm.

This species in its thoracic sculpture is the final and most feeble imitation of that of *niger*, and may be considered the link from that species to those which follow.

Although I am an advocate of the right of priority in nomenclature, the fact has always been patent to me that there are certain cases in which it should not be admitted. The present instance is one of these. Dejean first described this species (fide Chaudoir), under the name *perplexus*, from a discolored specimen which he indicated from Senegal. I hold in such cases that where everything is calculated to mislead, the description should be dropped as invalid and the earliest proper diagnosis accepted. I therefore adopt Say's name, although probably a year younger.

Occurs in the Gulf States and Cuba.

11. **C. texanus**, n. sp.—Body beneath black, legs pale, above bluish green, elytra darker. Head very minutely punctulate, an obsolete vertical puncture, labrum truncate, antennæ brownish, three basal joints pale. Thorax wider than long, narrower in front, apex very feebly emarginate, sides arcuate and slightly

narrowing at base, hind angles obtuse, disc moderately convex, median line feebly but broadly impressed, basal impressions short, moderately deep, surface coarsely and sparsely punctured, punctures denser at the base, less numerous at the sides and along the middle. Elytra similar in form to *memoralis*, finely but moderately deeply striate, striæ punctured, intervals flat, moderately densely and finely punctured, and sparsely clothed with short, pale rufous pubescence. Prosternum in front sparsely punctured, tip margined, episterna obsoletely punctured. Metasternal episterna sparsely submuricately punctured, elongate, margined. Abdomen as in *niger*. Epipleuræ black. Length .50 inch; 12.5 mm.

The color of the upper surface is nearly that of *cordicollis*, but with head and thorax more brilliant. The basal marginal line is rounded at the humeri, the third joint of the antennæ not longer than the fourth.

I have in my cabinet one of each sex, the male having unfortunately lost the middle tibiæ. I feel very certain of its position in the present group from the thoracic sculpture, and the form of the third joint of antennæ and the rounded basal line. These three characters taken together are in our fauna of equal value, with the absence of pubescence on the male middle tibia.

Occurs in Texas. Two specimens kindly given me by Mr. F. G. Schaupp, of Brooklyn.

12. C. pennsylvanicus, Say.—Beneath black, legs pale, above green, elytra darker. Head brilliant green, minutely punctulate, labrum feebly emarginate, palpi slender, antennæ rufous, three basal joints paler. Thorax bright green, very little wider than long, sides moderately arcuate, feebly sinuate posteriorly, hind angles acute not prominent, margin narrowly rufous, disc moderately convex, basal impressions linear moderately deep, median line finely impressed, surface with coarse punctures not very densely placed. Elytra striate, striæ punctured, intervals flat, moderately densely muricately punctured, and with short, brownish pubescence, basal line arcuate at humeri. Prothorax beneath coarsely but sparsely punctured, prosternum margined at tip. Metasternal episterna coarsely and sparsely punctured, margined, form elongate. Abdomen as in *niger*. Length .40—.44 inch; 10—11 mm.

Anterior femora of male simple.

I have seen a variety of this species in the cabinet of Mr. H. Ulke, entirely green, nearly as in *prasinus*, and which was from California.

Occurs principally in the Northern States and Canada, also California and Oregon.

This species having the prosternal episterna coarsely punctured, can only be confounded with the next three species. The elytral punctures being very distinct and submuricate in this, and very feeble in the others, will serve to distinguish it.

13. **C. floridanus**, n. sp.—Body beneath black, above green as in *sericeus*, legs pale. Head nearly smooth, labrum emarginate, antennæ pale. Thorax much broader than long, very little wider at base than apex, sides regularly arcuate with very feeble trace of sinuation posteriorly, margin very narrowly rufous, disc moderately convex, surface coarsely and moderately densely punctured, less densely at middle. Elytra of the form of *tricolor*, striate, striæ distinctly punctured, intervals densely punctulate, and with very short, reddish-brown pubescence. Prosternum margined at tip, coarsely punctured in front, episterna coarsely but rather indistinctly punctured. Metasternal episterna long, sparsely punctate. Abdomen as in *niger*. Length .48 inch; 12 mm.

The sculpture of the elytra is much more distinct than in any of the species of this group which follow, but not submuricate as in *pensylvanicus*, but very closely resembling that of *sericeus*. The thorax has nearly the outline of *impunctifrons*, but is more convex, and is of nearly the same size, relatively to the elytra.

The labrum is rather more emarginate than in *brevilabris*.

Three specimens, two ♀ Leconte, one ♂ Ulke, from Florida.

14. **C. brevilabris**, Lec.—Form and color of *pensylvanicus*, elytra bluish-black. Head and thorax similarly sculptured. Elytral intervals flat, finely and indistinctly punctured. Body beneath as in the preceding. Length .40—.48 inch; 10—12 mm.

Anterior femora of male simple. Labrum feebly emarginate.

Chaudoir adopts the name *quadricollis*, Kby., for this species having been misled by a note published by Dr. Leconte, in the Ann. Mag. Nat. Hist., Nov., 1870. This error was subsequently corrected, Proc. Acad., 1873, p. 325.

This species occurs in Illinois, Texas, Iowa, New Mexico, Colorado.

15. **C. tricolor**, Dej.—Similar in form to *pensylvanicus*, elytra black with very faint tinge of blue. Head green, slightly bronzed, labrum truncate. Thorax narrower at apex than base, broader than long, sides arcuate and feebly sinuate posteriorly, hind angles acute, not prominent; basal impressions fine, moderately deep; surface rather coarsely and densely punctured. Striæ of elytra fine but moderately deep, finely punctured, intervals flat, finely, moderately densely, but very indistinctly punctured. Body beneath as in *pensylvanicus*. Length .46—.52 inch; 11.5—13 mm.

The color of the head and thorax are apt to vary in this species and from green become cupreous. It is very closely allied to the next species and differs by feeble characters.

Occurs everywhere east of the Rocky Mountains, from Canada to Texas, and thence through Arizona to San Diego, California.

16. **C. nemoralis**, Say.—Closely allied to *tricolor*, but differs as follows: Head and thorax coppery bronze, (very rarely greenish), the latter always more or less subopaque and more finely punctured, anteriorly more convex, median line distinctly impressed in its entire length. Elytra black without

bluish tinge, intervals very finely and sparsely punctured. Length .44—.52 inch; 11—13 mm.

In the specimens from the Southern States, which are by far the best representatives of the species, the thorax is more decidedly sinuate behind, and the hind angles moderately prominent.

Occurs from Canada to Texas.

17. **C. glaucus**, Lec.

This species is closely allied to the preceding and differs in the labrum being distinctly emarginate, the thorax evidently sinuate near the base, the elytral striæ deeper and more closely punctate.

The color is variable. The head and thorax are usually bluish-green, the elytra bluish as in *tricolor*. A specimen in my cabinet is however, entirely green as in *nebraskensis*. Length .44—.50 inch; 11—12.5 mm.

Chaudoir says the labrum is truncate, but it will be found as stated above. The ^{*}male specimen of which he makes special mention is now before me, and it bears his own label, (*sericinitens*).

Occurs at Fort Yuma, California.

18. **C. simillimus**, Chaud.

Closely allied to the two preceding, differing from *nebraskensis* in having the thorax distinctly sinuate posteriorly, and the hind angles acute. From *glaucus* it differs in its truncate labrum. The thorax is relatively narrower than in either and more decidedly narrowed posteriorly, and the hind angles more acute. Its form is more slender also, and recalls *obsoletus*. The head and thorax are green, the elytra black with slight bluish tinge. Length .46 inch; 11.5 mm.

The unique before me is from Chaudoir, collected at San Francisco, California.

19. **C. nebraskensis**, Lec.—Body beneath black, legs pale, body above green, similar to *sericeus* but slightly darker. Head minutely punctulate, antennæ rufous, paler at base, labrum truncate. Thorax broader than long, sides moderately arcuate, posteriorly not sinuate, hind angles distinct, not acute, base and apex nearly equal, surface coarsely punctured, sparsely on the disc, more finely and densely at sides and base, sparsely pubescent. Elytra finely striate, striæ finely punctured, intervals flat, finely and sparsely obsoletely punctate, and with rufous pubescence, basal line rounded at humeri. Prosternum margined at tip, coarsely punctured in front, episterna very obsoletely punctured. Metasternal episterna long, margined, and moderately densely punctulate. Abdomen as in *niger*. Length .42—.52 inch; 10.5—13 mm.

This species resembles *brevilabris* in form, but differs in color and punctuation of prosternal episterna.

Occurs in the region between the Mississippi River and the Rocky Mountains from Dakota to Texas, also in Utah and Nevada.

20. **C. variabilipes**, Esch.—Form similar to *nebraskensis* or *brevilabris*. Body beneath and above black, rarely with a bluish tinge above, legs usually black but varying to testaceous. Head very minutely punctulate, antennæ piceous, basal three joints often paler, labrum feebly emarginate. Thorax as in *nebraskensis* slightly more sinuate posteriorly, hind angles subacute, surface coarsely and sparsely punctured, slightly more densely along the base, sparsely pubescent. Elytra finely striate, striæ finely punctured near the base, intervals flat, sparsely obsolete punctulate and sparsely pubescent. Prosternum feebly margined at tip, punctured in front, episterna very obsolete punctulate. Metasternal episterna long, margined, moderately densely punctulate. Abdomen as in *niger*. Length .40—.46 inch; 10—11.5 mm.

The legs of this species are usually black but with many variations between this and rufous. When the legs are pale the palpi and basal joints of the antennæ are the same. The prosternum is more feebly margined at tip than any of the associated species.

This species is widely distributed in California.

21. **C. vafer**, Lec.—Body beneath black, legs pale. Head metallic blue or violet, very minutely punctulate, antennæ rufous, three basal joints paler, labrum truncate. Thorax bluish, subopaque, very sparsely and finely punctulate and sparsely pubescent, in form resembling *nebraskensis*. Elytra of color and sculpture of *nemoralis*. Prosternum margined at tip, in front punctured, episterna nearly impunctured. Metasternal episterna long, punctured and margined. Abdomen as in *niger*. Length .48 inch; 12 mm.

The general resemblance of this species to *nemoralis*, the color together with the finely and sparsely punctured thorax, will serve to distinguish it.

Occurs in Texas.

22. **C. flaccidus**, n. sp.—Body beneath black, legs pale, above entirely green as in *nebraskensis*. Head moderately shining, minutely punctulate, labrum with very feeble emargination, antennæ brown, three basal joints pale. Thorax broader than long, sides moderately arcuate in front, distinctly sinuate posteriorly, hind angles acute, base very little broader than apex, median line and basal impressions moderately distinct, surface subopaque, sparsely and not deeply punctured, sparsely pubescent. Basal line of elytra arcuate at humeri, striæ fine moderately closely punctured, intervals flat, finely and moderately densely punctured, sparsely pubescent. Prosternum margined at tip, punctured in front, episterna very obsolete punctate. Metasternal episterna moderately densely punctured and margined. Abdomen as in *niger*, margined with testaceous at tip. Length .44 inch; 11 mm.

This species in the form of thorax occupies an exactly intermediate position between *vafer* and *obsoletus*. The thorax is not as opaque as in either of these but is by no means shining, the lustre being about that of *leucoscelis*. There may be observed on the disc of the thorax

a smooth line starting from the end of each basal impression and converging forward, this line is devoid of punctures and is defined by the punctures on each side of it being rather more closely placed. In color, and considerably in form, this species resembles *nebraskensis*, but the thorax of the latter is so much more coarsely and densely punctured and the surface shining. Mr. Ulke has a variety with the elytra bluish.

One specimen ♀, collected by Belfrage, in Waco County, Texas.

23. **C. obsoletus**, Lec.—Body beneath black, legs pale. Head blue, shining, minutely punctulate, labrum emarginate, antennæ rufous, paler at base. Thorax slightly broader than long, base very little broader than apex, sides arcuate in front, moderately deeply sinuate posteriorly, hind angles slightly obtuse, surface subopaque, bluish, with sparsely placed, rather coarse but vague punctures, sparsely pubescent. Elytra with fine striæ not visibly punctured except near the base, intervals flat, sparsely and finely punctured. Body beneath as in *vafer*. Length .42 inch; 10.5 mm.

Chaudoir is undoubtedly correct in recognizing this as a distinct species, as Dr. Leconte himself did in the first instance.

Occurs principally in the southern portions of California, but specimens have occurred as far north as Mariposa.

24. **C. solitarius**, Say.—Above bright green, moderately shining. Labrum truncate. Antennæ with third joint longer. Thorax slightly longer than wide, base and apex equal, sides moderately strongly arcuate in front, sinuate behind, hind angles rectangular slightly obtuse, surface rather sparsely punctured along the base, median line and apical impression. Basal line of elytra arcuate at humeri, striæ moderately impressed, punctured, intervals flat, sparsely punctulate and pubescent. Prosternum with feeble trace of marginal line at tip, in front very sparsely punctured, side pieces with few punctures. Metasternal episterna feebly margined, more strongly in front, sparsely punctured. Abdomen sparsely punctured and pubescent at the sides, smooth at middle, last segment margined with testaceous. Legs pale. Length .48—.56 inch; 12—14 mm.

In the male the anterior femora are distinctly subangulate at basal third.

This is the only species in our fauna in which the elytra when deprived of pubescence are as shining as the thorax.

Occurs from Canada to Louisiana, Colorado and New Mexico.

25. **C. leucoscelis**, Chevr.—Dark violet blue. Labrum truncate. Thorax as in *solitarius*, subopaque, sparsely punctured along the base, median line and in front, basal impressions long, arcuate. Elytral intervals moderately densely and finely punctulate, sparsely pubescent. Prosternum not margined at tip, in front smooth, episterna obsoletely punctured. Abdomen as in *solitarius*, last segment paler along the margin. Length .50—.60 inch; 12.5—15 mm.

Male with anterior femora subangulate at base.

After a careful study of specimens from Canada, the Western States, Arizona, California and Mexico, I feel the necessity of uniting *leucoscelis* and *cordicollis*.

The differences on which Chaudoir relies for separating the species are certainly very evanescent, such as a little more punctuation of the sides of the vertex and thorax. As might be expected, the northern forms are somewhat more rugose than the southern, but the smooth head is by no means constant in the southern forms. The little variation in the form of the thorax is not worth consideration, as there is in nearly every species an equal, and in many, a greater amount than here. From the inquiry I have made, I find that my correspondents separate the two above named almost entirely by the locality label. In reply to a note, Mr. Ulke stated, that were the locality labels removed from his series he would be entirely unable to separate them.

Chevrolat's name appears to have priority by several years, and I have adopted it.

From what has been already stated, this species is widely distributed over the United States and Mexico.

26. **C. prasinus**, Dej.—Body beneath black, legs pale, last ventral and margins of the two preceding segments testaceous, legs pale; above bright green as in *sericeus*. Head behind the eyes rather coarsely punctured, labrum truncate. Thorax broader than long, sides arcuate in front, gradually narrowed to base and not sinuate posteriorly, hind angles obtuse, disc coarsely but sparsely punctured, more densely at apex and base. Basal line of elytra arcuate at humeri, striæ finely punctured, intervals moderately densely and finely punctured and sparsely pubescent. Prosternum margined at tip, coarsely punctured in front, episterna moderately densely and finely punctured. Metasternal episterna long, margined, moderately densely punctulate. Abdomen as in *solitarius*. Length .68 inch; 17 mm.

Male with anterior femora subangulate at base.

Occurs from the Middle States westward to Colorado and to Texas.

27. **C. cumatilis**, Lec.—Body beneath black, legs pale, above opaque blue similar to *leucoscelis*. Head sparsely punctured except at middle of front, labrum truncate, antennæ rufous, three basal joints paler. Thorax similar in form to *leucoscelis* but longer and less convex, surface opaque with very sparsely placed coarse punctures, hind angles obtusely rectangular. Elytra finely striate, striæ finely and distinctly punctured, intervals flat with scarcely any traces of fine punctures and with very little pubescence, basal line angulate. Prosternum margined at tip, in front punctured, episterna coarsely but sparsely punctured. Metasternal episterna elongate, margined, moderately densely punctured. Abdomen almost entirely devoid of punctures and pubescence as in *tomentosus*. Length .50—.58 inch; 12.5—14.5 mm.

Anterior femora of male simple.

This species may also be considered an odd member of our fauna. With our species only under consideration, I am compelled to associate it with the *leucoscelis* group.

Occurs in southern California, (San Diego, Santa Isabel, Vallecita), extending into the Peninsula.

28. **C. augustus**, Newm.—Body beneath black, above entirely bright green as in *sericeus*. Head coarsely and deeply punctured except the epistoma and middle of front, labrum truncate, antennæ piceous, three basal joints pale. Thorax broader than long, broader at base than the apex, sides in front arcuate, posterior third subparallel, disc moderately convex, evenly and very densely punctate, basal impressions obsolete. Elytra scarcely broader than the thorax, basal line angulate at humeri, striæ fine and finely punctate, intervals flat, moderately densely punctate and sparsely pubescent. Prosternum margined at tip, in front densely and coarsely punctate, episterna coarsely punctured. Metasternal episterna very short, coarsely punctate. Abdomen coarsely punctured at the sides, less coarsely at middle. Legs testaceous, tarsi darker. Length .68 inch; 17 mm.

This species may be called an elongate *tomentosus* in form, nor does the resemblance cease here, the palpi being decidedly more dilated than is usual in the present group. The anterior femora of the male are rather suddenly narrowed at base.

I have seen but two specimens ♂ ♀, in the cabinet of Dr. Leconte, from Georgia.

29. **C. viduus**, Horn.—Agrees with *augustus* in sculpture, but is somewhat more elongate in form. Color beneath black, femora testaceous, tibiae and tarsi black, above black with tinge of violet. The punctuation of the thorax is a little less dense and that of the elytra rather more so. Antennæ black, except basal joint. Sculpture beneath as in *augustus*. Length ♀ .68 inch; 17 mm.

Two specimens only have been collected. The male is in the possession of Dr. S. V. Summers, who collected the species in Missouri, probably near St. Louis.

30. **C. æstivus**, Say.—Head and thorax green, slightly bronzed, elytra black with bluish tinge. Head punctured as in *augustus*. Thorax nearly as long as wide, base broader, sides with feeble sinuation posteriorly, disc coarsely and densely punctured. Elytra striate, striæ punctured, intervals finely, moderately densely but not very distinctly punctulate. Prosternum and side pieces nearly as in *augustus*. Length .64—.68 inch; 16—17 mm.

The anterior femora of the male are rather strongly subangulate near the base. The thorax of the female is usually broader than that of the male.

The short metasternal episterna and subangulate male femora, will readily distinguish this species from any of those with which it might be confounded.

Occurs principally in the Middle States region, and is not rare.

31. **C. platyderus**, Chaud.—Body beneath black, legs pale, above violet-blue, elytra slightly darker. Head coarsely punctured posteriorly and above the eyes. Antennæ rufous, three basal joints paler. Thorax broader than long, base broader than apex, sides in front feebly arcuate, posteriorly slightly converging but not sinuate, basal impressions feeble, surface densely and coarsely punctured. Elytra finely striate, striæ distinctly punctured near the base, becoming finer toward the apex, intervals flat, moderately densely and finely punctured, sparsely pubescent. Prosternum margined at tip, coarsely punctured in front, episterna coarsely but not densely punctured. Metasternal episterna short, coarsely punctured. Abdomen as in *niger*. Length .58 inch; 14.5 mm.

Male with anterior femora rather strongly subangulate at base.

Chaudoir has provisionally placed this species as a synonym of *diffinis* with these words: "I here reunite provisionally *platyderus*, of which the thorax is more flat, also the disc of the elytra, because I know at this moment but one individual." This one individual was probably a female. The differences besides those mentioned above are, thorax more densely punctured and broader, and especially the anterior femur of the male, where the subangulation is as distinct as in *æstivus*, while in *diffinis* the the femora are absolutely simple. I have no hesitation whatever in separating this as a distinct species.

Occurs in Illinois, Kan., Nebraska, N. Mex. and Indian Territory.

32. **C. diffinis**, Chaud.—Beneath black, legs pale, above bluish with a tinge of green, elytra darker. Head coarsely punctured, smooth at middle and in front. Antennæ brown, three basal joints paler. Thorax nearly as long as wide, base very little broader than apex, sides in front moderately arcuate, behind slightly converging, not sinuate, disc moderately convex, densely and coarsely punctured. Elytra striate, striæ with rather distant punctures, intervals flat, moderately densely punctulate. Prosternum, side pieces, and abdomen as in the preceding. Length .50—.60 inch; 12.5—15 mm.

Anterior femora of male simple.

This is the species which we have called *laticollis*, Say, and which Chaudoir emphatically denies. It appears that Say sent specimens of his species to Dejean, the collection of the latter is now in the possession of Chaudoir. It cannot be denied that Say has on several occasions distributed and named specimens which were not identical with his types. It is barely possible that an error of the latter kind may have occurred in this instance, but the fact still remains that a type if we may call it so, of *laticollis*, is now in the collection of Chaudoir. Whatever predilections we may have in favor of our own determinations of Say's species, I hardly think it safe to deny the validity of the sole remaining specimen which has been labelled by him. I therefore adopt the present name.

Occurs in the Middle States region.

33. **C. laticollis**, Say.—Very like the preceding species and differs in having a broader thorax, very feebly sinuate near the base, disc rather less densely punctured and more convex. Antennæ entirely rufous. Body beneath as in *diffinis*. Metasternal episterna long. Length .50—.62 inch; 12.5—15.5 mm.

Anterior femora of male with a short spine near the base.

This species is the *rufipes* of our present collections. The name must, however, be suppressed for reasons given under the preceding species.

Occurs from New York to Arizona and Florida. The specimens from Arizona are smaller than those from Texas and Louisiana, and the color above is an uniform dark violet-blue.

34. **C. orbus**, Horn.—Body beneath and legs black, above black rarely with a bluish tinge. Antennæ entirely black. Similar in form to the preceding but with a broader thorax, not sinuate posteriorly. The elytral striæ are very fine, and the punctures distinct but distant, intervals very finely, sparsely but indistinctly punctured. Body beneath as in *diffinis*. Metasternal episterna long. Length .60—.68 inch; 15—17 mm.

Anterior femora of male simple beneath.

There need be no difficulty in distinguishing this species. It is the only one in our fauna in this group, with black legs.

Occurs only in Texas, the other locality given by Chaudoir is erroneous, as Fuch's specimens were in all probability from Belfrage, and not collected in the "Etats du centre."

35. **C. cursor**, Chevr.—Beneath black, legs pale, above bluish-green. Head very sparsely punctate, antennæ rufous. Thorax similar in form to *viridifrons*, rather more convex, hind angles more obtuse, disc more shining and with coarse punctures very sparsely scattered. Striæ extremely fine, intervals sparsely and very obsoletely punctulate. Prosternum scarcely margined at tip, in front sparsely punctate, episterna coarsely punctate. Metasternal episterna as in *viridifrons*. Abdomen more sparsely punctate at middle than usual in the group. Length .54 inch; 13.5 mm.

Occurs in the south of California, also in the Peninsula and in Mexico.

The metasternal episterna are shorter than usual, but not to the extent seen in the *diffinis* group.

36. **C. Chaudoiri**, n. sp.

This species so nearly resembles the eastern forms of *sericeus* as to need no description, the differences being as follows:

Thorax very little wider than long, surface with very coarse punctures rather sparsely placed, and rather more shining. Length .60 inch; 15 mm.

The color is bright green as in our ordinary forms of *sericeus*, the

head similarly punctured, and the striæ and punctuation of the elytra the same. The anterior femora of ♂ are as in *sericeus*.

One specimen ♂ in my cabinet from Texas, another a ♀ with Dr. Leconte, from Tamaulipas, Mexico.

37. **C. sericeus**, Forst.

This species is so well known to every collector as to need but little mention.

The head is punctured as in *diffinis*. Antennæ usually pale, frequently (*regularis*), with the outer joints darker. The thorax varies greatly in form, being nearly quadrate at times or as broad as in *laticollis*. The punctuation is moderately coarse, very dense and rather deeply impressed. Striæ fine and with rather fine, distant punctures, varying but little in size from base to apex; intervals moderately densely but finely punctate. Prosternum scarcely margined at tip, in front coarsely and densely punctured, episterna coarsely and less densely punctured. Metasternal episterna long, moderately coarsely and densely punctate. Abdomen more densely punctured at sides than at middle. Length .50—.68 inch; 12.5—17 mm.

The anterior femora of the ♂ although rather rapidly narrowed at base, can hardly be called subangulate.

The color of the upper surface is subject to very great variation. The specimens from the east of the Rocky Mountains and those from Oregon are bright green, and as we go farther south in the Pacific region the specimens become gradually darker, and two in my cabinet are nearly of the color of *diffinis*. These darker forms are called *regularis*, Lec., Chaudoir having suggested their identity with *sericeus*. After a careful study of a large series in my cabinet, I am convinced that there is no character by means of which they may be separated. Certain forms approach *viridifrons* but the latter has a much longer thoracic sinuation, and the base is scarcely narrower than the apex, and the form more depressed.

Occurs everywhere in the United States and Canada.

38. **C. fuscicornis**, Dej.—Body beneath black, above black with faint tinge of blue, legs pale, tarsi piceous. Head rugulose at the sides, punctured behind, middle smoother. Antennæ brown, two basal joints paler. Thorax as long as wide, base broader than apex, sides moderately arcuate in front, slightly narrowed but not sinuate posteriorly, surface densely and rather coarsely punctured. Striæ fine and finely punctured, intervals flat and rather coarsely punctate. Prosternum not margined at tip, coarsely but sparsely punctured in front, episterna coarsely punctured. Metasternal episterna long, moderately densely punctured. Abdomen as in *sericeus*. Length .84—.90 inch; 21—23 mm.

Anterior femora of ♂ simple at base.

This and the next are our largest species.

Occurs in the Gulf States, also Illinois and Missouri.

39. **C. erythropus**, Germ.—Resembles the preceding and differs in having the thorax narrower, distinctly sinuate posteriorly, the antennæ always paler. Size as in the preceding.

The anterior femora of male subangulate at base.

Occurs from Ohio to Nebraska and Louisiana.

Some specimens collected by Mr. H. A. Brous, in Kansas, have a decidedly bluish tinge.

40. **C. viridifrons**, Esch.—Body beneath black, above variable, usually dark blue, often with the head and thorax slightly greenish. Head punctured as in *sericeus*, antennæ rufous. Thorax broader than long, base scarcely wider than apex, sides arcuate in front, rather strongly sinuate behind, hind angles rectangular, disc rather flat, densely punctured, rather more sparsely on each side of middle. Elytra slightly obovate, striæ extremely fine, distantly punctured, intervals finely but not densely punctulate. Prosternum feebly margined at tip, sparsely punctured in front, episterna sparsely punctate. Metasternal episterna moderate densely punctured. Abdomen as in *sericeus*. Legs pale. Length .50—.56 inch; 12.5—14 mm.

Anterior femora of male simple.

The metasternal episterna in this species are less elongate than in the majority of those with which it is associated, but by no means as short as in *diffinis* and its allies, the outer side still remaining somewhat longer than the anterior.

This species occurs in California, more commonly south of the latitude of San Francisco.

41. **C. herbaceus**, Chevr.—Body beneath black, legs pale, above bright green, elytra slightly darker. Head coarsely punctured posteriorly, wrinkled above the eyes, middle and front nearly smooth, labrum truncate, antennæ rufous. Thorax as long as wide, sides moderately arcuate in front, a long sinuation posteriorly, hind angles rectangular, disc convex, basal impressions moderate, surface regularly covered with deep coarse punctures. Elytra finely striate, striæ with fine rather distant punctures, intervals very finely and sparsely punctulate, sparsely pubescent. Prosternum not margined at tip, sparsely punctured in front, episterna coarsely and moderately densely punctured. Metasternal episterna long, obsoletely punctured and scarcely margined. Abdomen as in *cursor*, last segment margined with testaceous. Length .50—.64 inch; 12.5—16 mm.

Anterior femora of male simple.

The prosternal epipleuræ are narrow, but broader behind than in front, and vertical so that the sides of the thorax are obtusely margined. The affinities of this and the next species are too plain to be mistaken, and Chaudoir has done properly in placing them together.

Occurs in Georgia, Florida and Mexico. The specimens from the latter region are much larger.

42. **C. ruficauda**, Chaud.—Head bluish green, front at middle nearly smooth, at sides coarsely punctured, vertex and occiput coarsely punctured, a vague transverse impression behind the eyes, labrum truncate, antennæ rufous, third joint longer than the fourth. Thorax broader than long, sides strongly rounded and coarctate at base, hind angles rectangular slightly prominent, base truncate, disc convex (pulvinate), median line with vague impression, color dark blue, surface very coarsely and deeply punctured, the punctures denser at the base and sides. Elytra similar in form to *tricolor*, color black with slight tinge of blue, apical third orange red, surface sculptured as in *obsoletus*; epipleuræ, except at basal third, pale. Prosternum feebly or not margined at tip, in front with coarse punctures which become coarser and deeper as they approach the margin. Metasternal episterna moderately long, margined on the anterior end, coarsely punctured. Abdomen very sparsely punctate and pubescent. Legs pale. Length .44 inch; 11 mm.

The peculiarities of this species are so many as to render it distinct from every other in our fauna. The prothoracic epipleuræ here attain their minimum of development, being very narrow in their entire extent but narrower at base than apex. The basal impressions of thorax are totally obliterated, the base being squarely truncate.

In the males the anterior femora have a small spine near the basal third, while the ♀ femora are of normal form, and have no subangulation.

This species occurs in California, Fort Yuma, near the junction of the Gila and Colorado rivers, also in Mexico.

BRACHYLOBUS, Chaud.

This genus has been so well characterized by Chaudoir that I cannot do better than translate his words.

“The strange conformation of the mentum, altogether exceptional in this group, obliges me to separate this species from the rest of the *Chlaenius*; there are properly speaking no lobes; the mentum is transversely trapezoidal, much narrower anteriorly, scarcely at all emarginate in front, the sides very obliquely truncate, not at all arcuate and rather slightly sinuate; on each side of the middle is a deep round depression, the space between which is convex. Mentum tooth entirely absent.

This conformation of mentum is so peculiar that once seen it will be immediately recognized.

B. lithophilus, (Say).

This species is so well known as to need no special comment. It varies considerably in the form of the thorax as well as in color. The middle tibiæ of the male are as in *niger*, etc. Length .36—.38 inch; 9—9.5 mm.

Occurs from New York westward to Dakota and south to Texas.

ANOMOGLOSSUS, Chaud.

This genus differs from *Chlaenius* by the entire absence of any mentum tooth, the emargination being entirely filled with the basal membranous expansion of the ligula. The mandibles are also more elongate and less arcuate.

The males have the same pubescent space near the tip of the middle tibiæ which occurs in the more highly developed *Chlaenius*. The abdomen is punctured and pubescent over the entire surface, and the basal line of the elytra angulate at the humeri. The prosternum is margined at tip and coarsely punctured in all the species, and the metasternal episterna long.

The last joint of the maxillary palpi is glabrous in *emarginatus*, and slightly pubescent in the other two, the labrum deeply emarginate in *pusillus*, less in *emarginatus*, and very feebly in *amœnus*.

In color they all very nearly agree, head and thorax green, more or less bronzed, elytra bluish with brownish pubescence. Legs pale.

With these preliminary remarks, the following table will further assist in recognizing our species.

Thorax broader at base than apex, sides not at all sinuate posteriorly, hind angles obtuse, labrum moderately emarginate, last joint of maxillary palpi glabrous.....**emarginatus.**

Thorax with base and apex equal, sides very feebly sinuate posteriorly, hind angles obtuse, labrum feebly emarginate, palpi slightly pubescent.

amœnus.

Thorax narrower at base, sides very decidedly sinuate, hind angles acute, labrum deeply emarginate, palpi slightly pubescent.....**pusillus.**

A. emarginatus, Say.—Length .44—.52 inch; 11—13 mm.

Occurs from Canada to Kentucky.

A. amœnus, Dej.—Length .38 inch; 9.5 mm.

Appears to be rare in Georgia.

A. pusillus, Say.—Length .32—.34 inch; 8—8.5 mm.

From Massachusetts to Illinois.

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- C. cumatilis**, Lec., Ann. Lyc. V., p. 179; Journ. Acad. IV., pl. I, fig. 9; Chaud. Monog. p. 151.
- C. prasinus**, Dej., Spec. II., p. 345; Chaud. Monog., p. 191.
smaragdinus, Chaud., Bull. Mosc., 1843, p. 755.
- C. leucoscelsis**, Chev., Col. Mex. I., 71; Chaud. Monog., p. 190.
monachus, Lec., Ann. Lyc. V., p. 180.
var. *cordicollis*, Kby., Fauna Am. Bor. IV., p. 22.
chlorophanus, ‡ Lec., Ann. Lyc. IV., p. 435.
- C. solitarius**, Say, Trans. Am. Phil. Soc. II., p. 65; Chaud. Monog., p. 191.
chlorophanus, Dej., Spec. V., p. 662; Chaud. Bull. Mosc., 1856, III., p. 247.
- C. obsoletus**, Lec., Ann. Lyc. V., p. 180; Chaud. Monog., p. 244.
? *rogator*, Motsch., Bull. Mosc., 1859, II., p. 157.
- C. flaccidus**, n. sp.
- C. vafer**, Lec., Proc. Acad., 1852, p. 66; Chaud. Monog., p. 240.
- C. variabilipes**, Esch., Zool. Atl. V., p. 27; Chaud. Monog., p. 243.
asperulus, Ménét., Bull. Acad., St. Petersburg, 1844, II., p. 55.
obscurus, Lec., Ann. Lyc. V., p. 179.
- C. nebraskensis**, Lec., Proc. Acad., 1856, p. 28; Chaud. Monog., p. 239.
- C. simillimus**, Chaud., Bull. Mosc., 1856, II., p. 283; Monog., p. 243.
vicinus, ‡ Mann., Bull. Mosc., 1843, p. 193.
- C. glaucus**, Lec., Proc. Acad., 1856, p. 28; Chaud. Monog., p. 239.
sericinitens, Chaud., Bull. Mosc., 1856, II., p. 234.
- C. nemoralis**, Say, Trans. Am. Phil. Soc. II., p. 65; Chaud. Monog., p. 241.
? *fulgiceps*, Newm., Ent. Mag. V., p. 490.
longicollis, Chaud., Bull. Mosc., 1843, p. 752.
var. *oxygonus*, Chaud., loc. cit., p. 753.

- C. tricolor**, Dej., Species II., p. 334; Chaud. Monog., p. 241.
vigilans, Say, Trans. Am. Phil. Soc., 1834, p. 419.
quadracollis, Kby., Fauna Bor. Amer. IV., p. 22; fide, Lec., Proc. Acad., 1873, p. 325.
chalybeipennis, Chevr., Col. Mex. I., p. 72.
atripennis, Lec., Ann. Lyc. IV., p. 336.
- C. brevilabris**, Lec., Ann. Lyc. IV., p. 337; Chaud. Monog., p. 241.
amœnus, Chaud., Bull. Mosc., 1856, II., p. 282.
consimilis, Lec., Ann. Lyc. IV., p. 337.
- C. floridanus**, n. sp.
- C. pensylvanicus**, Say, Trans. Am. Phil. Soc. II., p. 66; Chaud. Monog., p. 238.
vicinus, Dej., Spec. V., p. 659.
pubescens, Harris, N. Eng. Farmer, 1828.
impunctifrons, || Kby., Fauna Am. Bor. IV., p. 21.
- C. texanus**, n. sp.
- C. circumcinctus**, Say, Trans. Am. Phil. Soc. IV., p. 418.
perplexus, Dej., Spec. V., 655; Chaud. Monog., p. 237.
virens, Chaud., Bull. Mosc., 1843, p. 753.
Poeysi, Chevr., Annales Ent. Soc. Fr., 1863, p. 194.
- C. impunctifrons**, Say, Trans. Am. Phil. Soc. II., p. 64; Chaud. Monog., p. 250.
- C. harpalinus**, Esch., Zool. Atl. V., p. 27; Chaud. Monog., p. 251.
- C. interruptus**, n. sp.
- C. niger**, Randall, Bost. Journ. II., p. 34; Chaud. Monog. p. 258.
exaratus, La Ferté, Ann. Ent. Soc. Fr., 1851, p. 249.
- C. alternatus**, Horn, Trans. Am. Ent. Soc., 1871, p. 327; Chaud. Monog., p. 258.
- C. purpuricollis**, Randall, Bost. Journ. II., p. 35; Chaud. Monog., p. 213.
- C. tomentosus**, Say, (Epomis), Trans. Am. Phil. Soc. II., p. 60; Dej., Spec. II., p. 357; Chaud. Monog., p. 73.
luctuosa, Germ., (Amara), Ins. Spec., Nov., p. 10.
amplus, Lec., Proc. Acad., 1856, p. 29.
- C. validus**, Chevr., (Omaseus), Col. Mex. II., n. 174; Chaud. Monog., p. 75.

C. emarginatus, || Kby., Fauna Am. Bor. IV., p. 23.—This must be dropped. The name is preoccupied and the type is not in Brit. Mus.

BRACHYLOBUS, Chaud.

Monographie des Chlénieniens, p. 287.

- B. lithophilus**, Say, (Chlaenius), Trans. Am. Phil. Soc. II., p. 62; Chaud. loc. cit.
viridanus, Dej., Species V., p. 660.
smaragdiger, Motsch., Bull. Mosc., 1864, II., p. 338.

ANOMOGLOSSUS, Chaud.

- A. emarginatus**, Say, (Chlaenius), Trans. Am. Philos. Soc. II., p. 63; Dej., Species II., p. 366; Chaud. Bull. Mosc., 1857, III., p. 5.
- A. amœnus**, Dej., (Chlaenius), Species V., p. 648; Lec., New Species, 1863, p. 12.
- A. pusillus**, Say, (Chlaenius), loc. cit.
elegantulus, Dej., Species II., p. 367.
Feisthameli, Laferté, Ann. Ent. Soc. Fr., 1851, p. 248.