THE SPECIES OF CHAETOCNEMA NORTH OF MEXICO
(COLEOPTERA: CHRYSONIDAE)

by
LOUIS GUSTAVE GENTNER

A THESIS
submitted to
OREGON STATE COLLEGE

in partial fulfillment of
the requirements for the
degree of
DOCTOR OF PHILOSOPHY

June 1953
Date thesis is presented May 13, 1953.
Typed by Helen Rush
ACKNOWLEDGMENTS

The writer wishes to express his sincere appreciation to William F. Barr, C. A. Frost, Melville H. Hatch, M. C. Lane, Hugh B. Leach, A. T. McClay, C. F. W. Muesebeck, and many others for the loan of specimens for study; to P. J. Darlington, Jr. for making comparisons of specimens with several of the LeConte types in the collection of the Museum of Comparative Zoology, Cambridge; and to Paul O. Ritcher for reviewing and criticizing the thesis.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>2</td>
</tr>
<tr>
<td>THE GENUS <em>CHAETOCNEMA</em> STEPHENS</td>
<td>4</td>
</tr>
<tr>
<td>General appearance and characteristics</td>
<td>6</td>
</tr>
<tr>
<td>Food habits</td>
<td>7</td>
</tr>
<tr>
<td>Synonomy of the genus</td>
<td>7</td>
</tr>
<tr>
<td>The subgenus <em>Tianoma</em></td>
<td>8</td>
</tr>
<tr>
<td>Main points of classification used in key</td>
<td>11</td>
</tr>
<tr>
<td>KEY TO THE SPECIES OF <em>CHAETOCNEMA</em></td>
<td>12</td>
</tr>
<tr>
<td>DESCRIPTION OF SPECIES</td>
<td>19</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>95</td>
</tr>
<tr>
<td>INDEX TO SPECIES</td>
<td>99</td>
</tr>
</tbody>
</table>
THE SPECIES OF CHAETOCONEMA NORTH OF MEXICO
(COLEOPTERA: CHRYSMELIDAE)

INTRODUCTION

The flea beetles of the genus Chaetocnema belong to the subfamily Alticinae of the family Chrysomelidae. One of the chief distinguishing characters of the beetles of this subfamily is that the posterior femora are enlarged to enable them to jump, hence the name, flea beetle.

The species of this genus in America, north of Mexico, were brought together for the first time by Crotch in 1873 (11, pp. 73-75), when he gave brief descriptions of the four known species and described six new species, making a total of ten species. All of the new species were from the cabinets of LeConte and Horn. No attempt was made to write up a key to the species.

In 1878 LeConte (26, pp. 17-19) described eight more new species and published a table or key to the sixteen species of Chaetocnema then known.

The species have not been treated taxonomically as a whole since 1889 (20, pp. 254-268), when Horn added six new species and published a key to the species then known, with a detailed description and the distribution of each. At that time there were considered to be twenty-five valid species.

In 1910 Blatchley published a key to the twelve
species of Chaetocnema which had been taken in or which probably occur in Indiana, with a description and the distribution of each (8, pp.1208-1212). Since then six new species and one new variety have been described, and a manuscript is being prepared by the writer in which five more new species are being described. With the publishing of this manuscript there will then be a total of thirty-six known valid species and one variety of Chaetocnema in America, north of Mexico.

In this thesis are presented the results of an extensive study of the taxonomic standing and distribution of the species of flea beetles belonging to this genus, which has extended over a period of about twenty-five years. During this time about five thousand specimens have been examined critically. A large number of these were collected by the writer in Wisconsin, Michigan, and Oregon; others were borrowed for study from the collections of the United States National Museum, California Academy of Sciences, Universities of Idaho and Washington, Oregon State College, and a number of private collections. Many specimens also were sent in to the writer for identification.

This thesis includes a key for the identification of the species, a detailed description of each, the present known distribution, and a citation of characters which distinguish closely related species. The five new species which are being described elsewhere are included in the key
for completeness.

In making this study the original description of each species has been consulted. The types of all of the valid species, except those of Chaetocnema blatchleyi Csiki (robusta Blatchley) and Chaetocnema floridana Blatchley, have been examined by the writer; however, authentically determined specimens of these two species were on hand for study. Without an examination of the type specimens, this study would have been much more difficult, because at least eleven of the species were described from only one specimen each, and two species from two specimens each. This allowed for no information as to the variations which could be found in individuals of a given species. The early descriptions also were mostly very brief and sometimes not too clear in the light of the much larger number of species now involved. The descriptions of the species written up in this paper are based upon information obtained by an actual examination of the types and where available, large series of individuals of a given species; by studying the original descriptions and Horn's synopsis (20, pp.254-268); and by consulting other publications bearing on the subject.

THE GENUS CHAETOCNEMA STEPHENS

Chaetocnema Stephens, 1831 (1+1, pp.325,326)

Plectroscelis Redtenbacher, 1845 (39, p.115)
Udorpes Motschulsky, 1845 (35, p.107)
Tianoma Motschulsky, 1845 (35, p.108)
Ydorpes Motschulsky, 1845 (35, addendum)
Hydropus Motschulsky, 1860 (36, p.235)

The genus Chaetocnema was described by Stephens in 1831 (41, pp.325,326). His description is as follows:

"Antennae short, 11-jointed: basal joint robust, curved; second also robust and short; three following rather slender, equal in length, but longer than the second; the remainder gradually increasing in stoutness, the last being the largest, ovate, subacuminate: head prominent, triangular: thorax short, transverse, the lateral margins rounded, the base obsolescently bisinuate: elytra broad, striated: legs stout, short: anterior tibiae simple: intermediate and posterior with a short acute tooth on the middle of the outer margin, furnished posteriorly with a fringe of hairs or setae: posterior femora very stout: tarsi all short."

His remarks following the description are:

"Chaetocnema has the antennae short and stout, the body very convex, sometimes slightly globose; the legs robust, especially the posterior femora; the hinder tibiae furnished toward the apex with a short, acute tooth, the lower or outer edge of which is furnished with a fringe of hairs, and the apex is armed with a simple acute spine: the tarsi are all short."

The first species listed by Stephens after his description of the genus was aridella (Paykull) (41, p.326), a species found in Europe, Asia, and northern Africa. This had been described by Paykull in the genus Galeruca (38, p.111) and it was later placed as a synonym of (Altica) hortensis Geoffroy (16, p.98). In 1926 Maulik designated Altica hortensis Geoffroy as the genotype of Chaetocnema (33, p.202).
The name, *Chaetocnema*, is based on two Greek words — "chaeta", meaning a bristle or a seta, and "cnema", meaning the lower part of the leg, or tibia. This refers to one of the chief distinguishing characters between the flea beetles of this genus and of the other genera of Alticinae, which is the form of the middle and posterior tibiae. These each bear a blunt, triangular tooth, about one-third from the apex, beyond which the tibia is deeply, arcuately sulcate to receive the tarsi, and the margins of the sulcation each bear a series of stiff bristles or setae. There is a short, stout spine at the apex of the hind tibia.

**GENERAL APPEARANCE AND CHARACTERISTICS.** The beetles of the genus have a very characteristic form. They are quite convex and vary from narrowly oval to broadly oval in form. The North American species are mostly piceous, with a distinct brassy or bronze luster. Two species are reddish-brown, one species bluish green, and one species and one variety have blue elytra. They range in length from about one and one-fourth to more than three millimeters. The antennae are comparatively short, eleven jointed; the anterior coxal cavities are closed behind; the pronotum is wider than long, in most species regularly arcuate from the base to the apex, but in some species with the anterior angles obliquely truncate, with a more or less distinct subapical angulation, always more or less punctate; the elytra are usually not much wider at the base than the
pronotum, regularly striate-punctate, in some species the punctures more or less confused in the striae on the disc.

FOOD HABITS. There is not much known about the food habits of most of these flea beetles. Generally the adults feed on the foliage of the host plants, while the larvae may either live in the soil, feeding upon the roots, or may live above ground as miners in the leaves and stalks. The adults of the corn flea beetle, Chaetocnema pulicaria Melsheimer, and the desert corn flea beetle, Chaetocnema ectypa Horn, often cause serious damage to corn by feeding on the foliage. The sweetpotato flea beetle, Chaetocnema confinis Crotch, may cause serious injury to sweetpotato plants in the south, while in the northern states the adults are found commonly on various species of Convolvulus. The toothed flea beetle, Chaetocnema denticulata (Illiger), has been taken by sweeping wheat fields and meadows. Many species are taken by sweeping reed grasses, Juncus spp., and sedge grasses, Carex spp., in moist areas.

SYNONYMY OF THE GENUS. Since the time that Stephens described the genus Chaetocnema, the species of that genus have been discussed and described under various other generic names, such as Plectroscelis, Udorpes, Ydorpes, Hydromus, and Tlanoma. Udorpes and Ydorpes are the same as Hydromus, since Motschulsky stated in 1860 (36, p.235) that he had described the genus Hydromus in 1845 (35, p.107), but that because of a typographical error the name had been
spelled Udorpes. This was spelled still a third way, Ydorpes, in the addenda at the end of the article (35, addenda). All of these genera except Tlanoma have been placed as synonyms of Chaetocnema. The latter is sometimes regarded as a subgenus of Chaetocnema. In 1845 Motschulsky (35, p.108) described Tlanoma as a genus, stating merely that "these are the large Eletroscelis, which have the elytra finely striate, with intervals". He designated Haltica dentipes Koch as the genotype (23, p.38). That species was later placed as a synonym of Chaetocnema (Chrysomela) concinna Marsham (32, p.196).

THE SUBGENUS TLANOMA. Maulik in 1926, in his publication, The Fauna of British India, (33, pp.202-220) did not use the subgenus Tlanoma. He stated that: "Sometimes Tlanoma, Motsch., is regarded as a subgenus of Chaetocnema". In 1951 Heikertinger in his "Keys for the identification of the palearctic species of the genera Podagrica Foudr., Mantura Steph. and Chaetocnema Steph." (translation from German) treated the species of Chaetocnema under two subgenera, Tlanoma and Chaetocnema (17, pp.163-201). He stated that the palearctic species lend themselves very nicely to classification under the two subgenera, but that with the exotic species there are difficulties. He also mentioned the fact that neither Maulik nor Horn had made use of the subgenus in their treatment of Chaetocnema, however, that such North American species as subviridis, ectypa, confinis,
and *quadricollis* are true *Tlanoma*.

The characters which Heikertinger sets forth for the two subgenera (17, p.170) are as follows:

A. Subgenus *Tlanoma*

1. Front between the bases of the antennae with a more or less distinct, mostly smooth, impunctate longitudinal carina or keel which is limited laterally toward the antennal sockets by a groove.

2. Vertex not punctate anteriorly to the transverse impression, but with a number of coarse punctures near the eyes, which may meet on the posterior part of the vertex.

3. Base of pronotum on each side often with a short, finely impressed longitudinal line or an indistinct, oblique impression in place of it (in the case of the smaller forms, both are usually absent).

4. Elytra entirely regularly punctate-striate, even the short scutellar row hardly ever irregular. Metasternum smooth or singly punctate.

5. The larger forms possess a relatively broad head, flatter frontal carina, and a more subparallel body form; the smaller forms are narrow or small headed, and with tapering egg-shaped form.

Type: *concinna* Marsham (*dentipes* Koch)
B. Subgenus Chaetocnema

1. Front between the bases of the antennae and below these broad and flat, sloping obliquely downward, generally distinctly punctate to the transverse impression; without carina, and without lateral grooves beside the antennal sockets.

2. Vertex densely, regularly punctate to the transverse impression (rarely scattered and fine, but even then regularly distributed).

3. Pronotum without a longitudinal impression at either side of the base. Body generally strongly convex, of somewhat cylindrical form.

4. Rows of punctures of the elytra regular at the sides, but generally more or less confused on the disc, seldom entirely regular. Metasternum punctate in the middle.

5. Head generally relatively large and broad.

Type: hortensis Geoffroy (aridella Paykull)

After critically examining specimens of concinna and hortensis from the vicinity of Vienna, Austria, which had been determined by Heikertinger, the writer has concluded that these two species represent the extreme in variation that could occur in the genus. In none of the North American specimens is the frontal carina as long and as distinct as in the European concinna. In trying to group the North American species into the two subgenera, so many
exceptions and overlapping characteristics were found, that it was decided best to ignore this classification in order to avoid confusion, and to classify the species only under the genus Chaetocnema proper.

There are more North American species with regular punctuation in the elytral striae that would come under the subgenus Chaetocnema than there are with confused punctuation. The species subviridis, our largest species, which Heikertinger classes as a true Tianoma (17, p.164) almost always has the punctures of the sutural striae confused, does not have the typical basal impression on each side of the pronotum, and has the head relatively narrow, instead of relatively broad. In crenulata, which because of its impunctate vertex and regular striae would come under Tianoma, the front is rather flat and broad, and there are no basal impressions on the pronotum. In brunnescens, which would come under Chaetocnema because of its densely punctate vertex, there are definite oblique basal impressions on the pronotum, and the striae are regular. The species cribrata, which because of its confused elytral punctuation should come under the subgenus Chaetocnema, has oblique basal impressions on the pronotum. There are also numerous other inconsistencies.

MAIN POINTS OF CLASSIFICATION USED IN THE KEY. In order to make it easier to follow the key to species a few of the main points of classification are here mentioned.
The species are first divided into two divisions based on whether the sides of the pronotum are regularly arcuate from base to apex, without oblique truncation of anterior angles, or whether the anterior angles of the pronotum are obliquely truncate, with post-apical angulations. The former are subdivided on a basis of confused or regular punctuation of the elytral striae, and those with regular punctuation are again divided on a basis of whether the vertex is punctate, or absolutely smooth, except for punctures near the eyes. The species with obliquely truncate anterior angles of the pronotum are divided on a basis of the pronotum having arcuate sides, narrowed in front, or whether the pronotum is transversely quadrate, not narrowed in front. These form the broad characters for separating the species.

KEY TO THE SPECIES OF CHAETOCNEMA

1. Sides of pronotum regularly arcuate to apex, without oblique truncation and post-apical angulation at anterior angles ____________________________ 2
   Sides of pronotum obliquely truncate at anterior angles, with a post-apical angulation ____________________________ 32

2. Punctures of some of the elytral striae confused or irregularly arranged, at least toward the base ______ 3
   Punctures of the elytral striae in regular rows, except sometimes the sutural striae ____________________________ 8
3. Length of body distinctly less than twice its width -
Length of body at least twice its width - - - - - - 6

4. Sides of elytra very opaque; punctures much confused
   almost to sides and apex; pronotum shining, scarcely
   visibly alutaceous, punctures relatively small,
   closely placed - - - - - - - - - 1. pertruberata Horn.
Sides of elytra moderately shining, punctures moder-
ately confused to a little beyond middle; pronotum
distinctly alutaceous, punctures rather coarse,
closely placed - - - - - - - - - - - 5

5. Sides of elytra rather broadly, regularly arcuate;
disc of pronotum and of elytra separately convex;
elytra 2.5 times as long as pronotum; Atlantic
States - - - - - - - - - 2. cribrata LeConte.
Sides of elytra more narrowly arcuate, almost sub-
parallel at middle; disc or pronotum and of elytra
more in the same plane; elytra more than 2.5 times
the length of pronotum; Western States - - - -
- - - - - - - - - - - - - - - - - 3. macleayi new species.

6. Body twice as long as wide, or slightly longer; elytra
   at base wider than pronotum, disc subdepressed, um-
bones prominent - - - - - - 4. irregularis LeConte.
Body distinctly more than twice as long as wide - - - 7

7. Elytra with sides subparallel, subcylindrical; pronon-
tum with sides roundly arcuate, disc convex to high
point at center, giving subspherical appearance - -
5. subcylindrica LeConte.
Elytra with sides narrowly arcuate from base to apex,
disc somewhat depressed, humeri absent; pronotum
prominent, as wide as elytra.

6. magnatarsa new species.

8. Vertex always punctate, sometimes indistinctly

9. Vertex absolutely impunctate, except near eyes

10. Color of elytra and pronotum black, with distinct
    bronze or brassy luster.

7. protensa LeConte.
Color of elytra deep blue, sometimes greenish.

7a. variety splendida Gentner.

11. Punctures of vertex distinct, not very fine

12. Punctures of vertex very fine to indistinct


8. brunnescens Horn.
Color black, with bronze or brassy luster.

14. Frontal region pubescent, subopaque, with moderately
    coarse punctures very closely placed, rugose.

9. denticulata (Illiger).
Frontal region not pubescent, shiny to alutaceous,
    with large punctures, usually well separated

10. cribrifrons LeConte.
Pronotum finely to heavily alutaceous, not very shiny;
    elytral striae not widely separated.

11. Elytra with sides narrowly arcuate from base to apex,
disc somewhat depressed, humeri absent; pronotum
prominent, as wide as elytra.


13. Color black, with bronze or brassy luster.

14. Frontal region pubescent, subopaque, with moderately
    coarse punctures very closely placed, rugose.

15. Pronotum highly shining, smooth; elytral striae widely
    separated.

16. Punctures of vertex very fine to indistinct.

17. Punctures of vertex distinct, not very fine.


19. Color black, with bronze or brassy luster.

20. Vertex absolutely impunctate, except near eyes.
15. Form elongate oval; elytra tapering strongly to apex, very convex; eyes widely separated
   - - - - - - - - - - - - - - - - - - - - - - - - 11. *floridana* Blatchley.
Form broadly oval, regularly rounded; elytra rather broadly rounded at apex, moderately convex; eyes moderately separated
   - - - - - - - - 12. *frosti* new species.

16. Punctures of elytral striae feebly impressed, faint toward apex
   - - - - - - - - - - - - - - - - - - - - - - - - 17
Punctures of elytral striae well impressed, not faint toward apex
   - - - - - - - - - - - - - - - - - - - - - - - - 18

17. Sides of pronotum nearly straight, little narrowed anteriorly; sides of pronotum and of elytra almost continuous
   - - - - - - - - - - - - - - - - - - - - - - - - 13. *pinguis* LeConte.
Sides of pronotum arcuate, widest at middle; sides of pronotum and of elytra separately rounded
   - - - - - - - - - - - - - - - - - - - - - - - - 14. *texana* Crotch.

18. Pronotum with distinct basal marginal line, without a series of coarser punctures, surface faintly alutaceous
   - - - - - - - - - - - - - - - - - - - - - - - - 15. *aeumila* Horn.
Pronotum with distinct basal marginal row of punctures on either side, or with coarser than discal punctures close to basal margin
   - - - - - - - - - - - - - - - - - - - - - - - - 19

19. Vertex and pronotum very opaque, the latter distinctly widest at base; elytra narrowly oval, intervals scarcely wider than striae
   - - 16. *opacula* LeConte.
Vertex and pronotum densely alutaceous, but not
opaque, somewhat shining, the latter widest at middle; elytra broadly oval, intervals wider than striae — — — — — — — 17. minuta Melsheimer.


Pronotum and elytra uniformly colored — — — — — — — 21


Color uniformly piceous, with brassy or bronze luster; form variable — — — — — — — — — — — — — — — — — 22

22. Pronotum with an entire basal marginal line, not defined by coarser punctures — — — — — — — — — — — — 23

Pronotum with a basal marginal row of coarser punctures, sometimes continued to middle as a line — 27

23. Size very small, length about 1.25 mm.; pronotum densely alutaceous; elytra shining — — — — — — — — — — — — — — — — — 20. gentneri Csiki.

Size larger, length 1.50 to 3.50 mm. — — — — — — — 24

24. Tibiae entirely piceous or dark brown; surface very distinctly alutaceous and subopaque — — — — — — — 25

Tibiae more or less testaceous or rufotestaceous; surface shining — — — — — — — — — — — — — — — — — 26

25. Form narrowly oval; disc very convex; pronotum narrowed apically; elytra somewhat pointed at apex — — — — — — — — — — — — — — — — — 21. alutacea Crotch.

Form oblong-oval, robust; disc moderately convex;
Pronotum wide, prominent, little narrowed apically; elytra broadly rounded at apex – 22. **blatchlevi** Csaik.

26. Pronotum usually alutaceous, with a median smooth space posteriorly; scutellar striae confused; color brassy green, bluish green, or blackish with brassy luster; distance between the eyes more than one-half the width of head across the eyes, viewed from above – – – – – – – – – – – – 23. **subvirdis** LeConte.

Pronotum usually not distinctly alutaceous, without median smooth space; scutellar striae regular; color golden bronze; distance between the eyes one-half the width of head across the eyes, viewed from above – – – – – – – – – – 24. **opulenta** Horn.

27. Pronotum extremely indistinctly punctate – – – – – 28

Pronotum distinctly, from finely to coarsely punctate – – – – – – – – – – – – – – – – 29

28. Pronotum very finely alutaceous, blackish, with faint brassy luster, barely perceptibly punctate; basal marginal line with coarse punctures well separated; appendages dark – – – – – – 25. **obesula** LeConte.

Pronotum distinctly alutaceous, with pronounced bronze or brassy luster; very fine, indistinct basal marginal line, with coarse punctures, closely placed, appendages rufotestaceous – – – – 26. **ectypa** Horn.

29. Pronotum finely, but distinctly punctate – – – – – 30

Pronotum with moderately coarse to coarse, deep
punctures, irregularly placed  31

30. Narrowly oval; eyes prominent, distance between eyes half the width of head across eyes, viewed from above; elytra distinctly wider at base than pronotum  27. pulicaria Melshemer.

More broadly oval, eyes not prominent, distance between eyes more than half the width of head across eyes, viewed from above; elytra scarcely wider at base than pronotum  28. subconvexa new species.

31. Pronotum with punctures moderately coarse, elongate, moderately closely placed; distinctly alutaceous; form broadly oval, convex  29. cremulata Crotch.

Pronotum with punctures coarse, round, widely separated, some in short rows, shining; form narrowly oval, subdepressed  30. magnipunctata Gentner.

32. Pronotum arcuately narrowed from base to apex  33

Pronotum transversely quadrate, not narrowed in front except at the oblique truncation  36

33. Sides of elytra divergent and nearly straight to basal two-fifths, then broadly subangulate, then broadly arcuate to apex; intervals strongly costiform  31. costata Fall.

Sides of elytra regularly arcuate; intervals not strongly costiform  34

34. Pronotum without distinct basal marginal line  32. confinis Crotch.
Pronotum with more or less entire basal marginal line.

35. Form elongate oval, narrow, subdepressed; sides of elytra subparallel.

---  33. elongatula Crotch.

Form regularly oval, convex; sides of elytra regularly arcuate.

---  34. dispar Horn.

36. Basal marginal line of pronotum distinct; pronotum slightly wider in front; antennae and legs entirely rufotestaceous, posterior femora sometimes darker.

---  35. quadricollis Schwarz.

Basal marginal line indistinct; pronotum not wider in front; outer joints of antennae and all femora darker.

---  36. decipiens LeConte.

**DESCRIPTION OF SPECIES**

1. Chaetocnema perturbata Horn

*Chaetocnema perturbata* Horn, 1889 (20, pp.257,258)

**DESCRIPTION.** Oblong oval, convex, piceous; surface distinctly bronzed and shining; sides of elytra opaque. Antennae rufotestaceous at base, apical joints piceous. Head alutaceous; punctures of vertex moderate in size, closely placed. Pronotum not much wider than long; sides arcuate, gradually narrowed anteriorly; basal marginal line distinct at the sides; surface shining, not distinctly alutaceous; punctures moderate in size, closely placed, coarser along the base. Elytra not wider at base than
pronotum; humeri oblique; umbones feeble; the punctures moderately coarse and deep, closely placed, and much confused at base as far as the fifth or sixth stria or beyond, and nearly to the middle or beyond, the striae at the apex and sides regular, the latter deeply impressed; intervals convex and without punctures. Body beneath piceous, feebly bronzed, shining. Abdomen rather coarsely, and at the sides closely punctate. Anterior and middle femora brown, posterior femora piceous, bronzed; tibiae and tarsi rufotestaceous. Length 2.00 to 2.52 mm.; width 1.36 to 1.40 mm.

TYPE LOCALITY. Minnesota. The type is in the collection of the Academy of Natural Sciences, Philadelphia.

DISTRIBUTION. Specimens have been examined from Colorado -- Veta Pass; Kansas -- Topeka; and Minnesota; a total of six specimens. Leng (29, p.301) gives the distribution as Minnesota and Colorado. The species listed by Beller and Hatch (4, p.132) as occurring in Washington is not perturbata, but maclavi, a new species.

REMARKS. This species is readily separated from other related species by the opaque sides of the elytra in contrast to the shiny disc, and by the extremely confused, closely placed punctures covering a large part of the basal area of the elytra. It is rather oblong in outline, robust, with prominent pronotum, and with the eyes widely separated.
2. Chaetocnema cribrata LeConte

Chaetocnema cribrata LeConte, May, 1878 (26, p.419)

Chaetocnema rudis LeConte, June, 1878 (27, p.615)

DESCRIPTION. Broadly oval; disc of pronotum and of elytra separately convex; bronze or brassy, moderately shining. Antennae rufotestaceous, basal joint darker, apical five or six joints piceous. Head alutaceous; front coarsely, closely punctate; vertex rather finely punctate, punctures well spaced. Pronotum about one-half wider than long, somewhat narrowed in front, slightly arcuate on the sides, widest at base; moderately coarsely, closely punctate; disc convex. Elytra not wider at base than pronotum; humeri very obliquely rounded; sides broadly arcuate; disc convex; punctures rather coarse and deep, variably confused, from the first two or three striae to beyond the umbone, and extending beyond the middle. Body beneath piceous, faintly bronzed. Abdomen moderately coarsely, moderately closely punctate. Anterior and middle femora dark brown, posterior femora piceous bronzed; tibiae and tarsi rufotestaceous. Length 2.10 to 2.24 mm.; width 1.20 to 1.32 mm.

TYPE LOCALITY. Cambridge, Massachusetts, one specimen collected by Mr. Schwarz in February under moss. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Specimens have been examined from
Connecticut -- Cornwall, July 5, 1925 (Frost); Maine --
Paris, July 15, 1913 (Frost); Massachusetts -- Framingham,
June 8, 1907 (Frost); Natick, July 21, August 4, 1947
(Frost); Sherborn, Dec. 13 (Frost); Michigan -- Marquette;
New Hampshire -- Antrim, June 21, 1933 (Frost); White Moun-
tains, Peabody River, July 11, 1925 (Quirsfeld); New Jersey
-- Oradell, April 6, 1918 (Quirsfeld); a total of twelve
specimens. Leng (29, p.301) gives the distribution as
Massachusetts, (Or.?). Horn (20, p.257) mentions one speci-
men from Oregon. This is not cribrata, but the new species,
maclavi.

REMARKS. This species can be separated from those with
irregular punctuation of the striae by its shorter, broadly
oval, convex form, and its very obliquely rounded humeri.
The pronotum is widest at the base; sides subparallel to
about the middle, then narrowing somewhat anteriorly. The
disc of the pronotum and of the elytra are separately con-
 vex. This species is not abundant.

The writer considers rudis LeConte to be the same as
cribrata. LeConte (27, p.615) described rudis from a single
specimen and stated that it differed from cribrata by the
much less confused elytral striae. An examination of the
type shows that except for the less confused elytral punctu-
tation, it closely resembles cribrata. The extent of the
confusion of the punctures in the elytral striae varies
greatly when a series of specimens is examined, and when
one considers the fact that each of these species was described from only a single specimen, the variation represented in these two specimens could easily occur in a given series. The specimen of *cribrata* from Oradell, New Jersey has only the first two striae definitely confused.

Horn wrongly placed *rudis* as a synonym of *irregularis* LeConte (20, p.258). This can be accounted for by the fact that in the Horn collection only the first specimen under *irregularis* is that species. The others are from the northwest and California, and belong to the new species *maclayi*, which somewhat resembles *cribrata*.

Horn in his remarks under *cribrata* (20, p.257) wrongly stated: "The surface is shining everywhere, while in *cribratus* the sides of the elytra are decidedly opaque". Evidently he was referring to *perturbata* instead of *cribratus*. Again under his remarks on *irregularis* (20, p. 258) he refers erroneously to the opaque sides of the elytra in discussing a specimen in Mr. Ulke's collection: "By the table this form might be considered to be *cribrata*, but in this the sides of the elytra are opaque".

3. *Chaetocnema maclayi* new species

The detailed description of this species is given in a manuscript which is being prepared for publication in the near future.
4. **Chaetocnema irregularis** LeConte

**Chaetocnema irregularis** LeConte, 1857 (24, p.69)

**DESCRIPTION.** Elongate oblong oval, somewhat subdepressed, twice as long as wide; piceous, with bronze luster, feebly shining. Antennae piceous, sometimes the basal two or three joints dark reddish brown. Head distinctly alutaceous; punctures of vertex moderately coarse and closely placed. Pronotum nearly one-half wider than long; sides arcuate, very little narrowed anteriorly; surface alutaceous, rather coarsely, closely punctate, with a smooth median space near the base. Elytra wider at the base than the pronotum; humeri obtuse; umbones fairly prominent; surface faintly alutaceous; punctures coarse, confused in two to five striae on basal third only. Body beneath piceous, faintly bronzed. Abdomen moderately coarsely, moderately closely punctate. Femora piceous bronzed; tibiae and tarsi dark brown. Males, length 1.96 to 2.40 mm.; width 0.96 to 1.16 mm. Females, length 2.00 to 2.44 mm.; width 1.00 to 2.44 mm.

**TYPE LOCALITY.** San Jose, California. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

**DISTRIBUTION.** Specimens have been examined from California — Clear Lake, April 22, 1938 (McClay); Forrestville, April 28, May 19, 1938 (McClay); Glen Ellen, Sonoma County, May 19, June 6, 1938 (McClay); Lakeport, April 22,
1938 (McClay); Sebastapol, April 22, 1936 (McClay); Stubbs, Lake County, April 22, 1938 (McClay); a total of fifty-four specimens.

Leng (29, p.301) gives the distribution as California, Oregon, Nevada, Michigan, the latter referring to *rudis*, which was erroneously placed as a synonym of *irregularis* by Horn (20, p.258). The distribution given by Leng was based on that given by Horn. An examination of the specimens in the Horn collection under the name of *irregularis* showed that only the first specimen in the series is really that species. The others are western specimens of the new species, *maclayi*.

**REMARKS.** This species may be separated from others with irregular striae by its elongate, oblong oval, somewhat subdepressed form, rather transverse pronotum, the confused punctuation basal, not reaching the middle, the appendages quite dark, and the first tarsal joint on the anterior legs of the male very little dilated.

5. *Chaetocnema subcylindrica* LeConte

*Chaetocnema subcylindrica* LeConte, 1878 (26, pp.17,19)

*Chaetocnema cylindrica* LeConte, 1878 (26, p.417)

*Chaetocnema lecontei* Duvivier, 1885 (12, p.35)

**DESCRIPTION.** Elongate oblong, sides nearly parallel, more than twice as long as wide; piceous with distinct aeneous bronze luster, moderately shining. Antennae
piceous; three basal joints dark brown. Head densely alutaceous; punctures of vertex moderately coarsely, moderately closely punctate, with a smooth median area; front more coarsely, closely punctate. Pronotum nearly one-third wider than long; sides very much rounded, widest at middle, scarcely narrower anteriorly than at base; disc very convex, highest at center, giving it a spherical appearance; surface finely alutaceous, somewhat shining; punctures moderately coarse, closely placed, with a median smooth space posteriorly. Elytra slightly wider at base than pronotum; humeri rounded; umbones not prominent; sides subparallel; disc with striae of moderately coarse punctures, closely placed, usually the scutellar and first two discal striae irregular sometimes to beyond the middle. Body beneath piceous, moderately shining. Abdomen with two basal segments moderately coarsely punctate, punctures well separated; apical segments more finely, quite densely punctate. Femora piceous; tibiae and tarsi dark brown. Males, length 1.96 to 2.32 mm.; width 0.84 to 1.00 mm. Females, length 2.04 to 2.36 mm.; width 0.88 to 1.04 mm.

TYPE LOCALITY. Detroit, Michigan, collected by Hubbard and Schwarz. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Specimens have been examined from Iowa -- Ames, May 3, 1948 (Blickenstaff); Maine -- Monmouth, July 14, 1916 (Frost); Massachusetts -- Cambridge,
December, 1873; Hopkinton, June 1, 1913; Lexington, August 31, 1921; Sherborn, May 27, 1916, June 15, 1949 (Frost); Michigan — Fennville, May 23, June 19, 20, July 12, 1928 (Gentner); Lexington County, June 12, 1923 (Hatch); Minnesota — Mora, June 15, 1907; New Jersey — Irvington, March, June 10; Raritan, May 12; Canada — Ontario, Prince Edward County, May 23, 24, 1946, August 7, 1949 (Brimley); a total of seventy-two specimens. Leng (29, p.301) gives the distribution as Massachusetts, Pennsylvania, British Columbia. The latter locality is questionable. Horn (20, p.259) gives the distribution as from Massachusetts to Pennsylvania, Michigan, Wyoming, and British Columbia. An examination of the Wyoming specimen in the Horn collection shows this to be different.

FOOD PLANTS. Taken on sedge grass, Carex sp.

REMARKS. This species is readily distinguished from other species with irregular striae by its elongate oblong form, with sides of elytra almost parallel, giving it a cylindrical appearance, and the pronotum, which has a spherical appearance. The confused punctuation is more limited in extent, and the first tarsi on the anterior legs of the male are not greatly enlarged. The appendages also are quite dark.

LeConte described this species as cyindrica (26, p. 417); however, in the same article in the key to species (26, p.419) he listed it as subcylindrica, which name was
 retained as valid, since Baly had already used the name, *cylindrica*, for a species from Japan (1, p.208). Duvivier, apparently not noticing the change of name in the key, substituted the new name, *lecontei*, for *cylindrica* in 1885 (12, p.35).

6. *Chaetocnema magnatarsa* new species

The detailed description of this species is given in a manuscript, which is being prepared for publication in the near future.

7. *Chaetocnema protensa* LeConte

*Chaetocnema protensa* LeConte, 1878 (26, p.417)

**DESCRIPTION.** Very elongate oval, more than twice as long as wide; moderately shining, surface distinctly bronzed or brassy, scutellum often bluish. Antennae with five or six basal joints rufotestaceous below, tinted with piceous above, apical five or six joints piceous. Head varying from finely to densely alutaceous; punctures on vertex from rather fine to moderately coarse, and from fairly distant to quite closely placed, sometimes with a median smooth space; punctures on front rather coarse and very closely placed and in unrubbed specimens front is covered with long, whitish hairs. Pronotum about one-third wider than long; sides broadly arcuate and narrowing slightly anteriorly; basal marginal line usually distinct at sides; surface varying from very faintly to quite densely
alutaceous; punctures varying in specimens from fairly fine to moderately coarse, usually separated by at least their own diameters, sometimes with a median smooth space basally. Elytra a little wider at base than pronotum, in some specimens scarcely so; humeri somewhat rounded; umbones not prominent; disc moderately convex; striae regular, not or only faintly impressed, composed of rather coarse, shallow, closely placed punctures; intervals flat. Body beneath piceous, moderately shining, with faint brassy bronze luster. Basal abdominal segment rather coarsely, closely punctate, others more finely punctate. Femora piceous, bronzed; tibiae and tarsi rufotestaceous. Males, length 2.32 to 2.88 mm.; width 1.00 to 1.32 mm. Females, length 2.45 to 3.12 mm.; width 1.16 to 1.48 mm.

TYPE LOCALITY. Detroit, Michigan (Hubbard and Schwarz). Described from one specimen which is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Specimens have been examined from Colorado -- Veta Pass; Michigan -- East Lansing, June 30, 1921, May 13, 1922, April 27, May 4, September 27, 1923, May 2, June 4, 1924, May 7, 1926 (Gentner); Onion Lake, Oakland County, June 17, 1914 (Malkin); Oregon -- Keerins Ranch, Izee, June 24, 1935 (Schuh); Malheur Lake, June 24, 1924 (Fender); South Dakota -- Volga; Washington -- Sprague; Canada -- Cypress Hills, Alberta, May 15, 1926 (Carr); Edmonton, Alberta, June 4, 1917, May 17, June 5,
1919, June 3, 1920 (Carr); Aweme, Manitoba, October 18, 1915 (Criddle); a total of twelve hundred ninety-seven specimens. Horn (20, p.259) gives the distribution as Colorado (Veta and Garland), Detroit, and at Deer Park, Maryland. Leng (29, p.301) gives the distribution as Colorado, Michigan. Beller and Hatch (4, p.133) give the distribution as Maryland (Horn), Michigan (Horn), Indiana (Blatchley), Kansas (Douglas), Colorado (Horn), Washington. An examination of the specimens in the Kansas State College collection under **Protensa**, showed these to be **denticulata**.

**FOOD PLANTS.** Taken on marsh grass.

**REMARKS:** This species is readily distinguished from other species with regular striae by its very elongate, rather slender form. The color is distinctly bronzed or brassy, quite often with bluish scutellum. In some specimens the femora also have a bluish cast. Often the pronotum is distinctly bronzed and the elytra are brassy. There is a wide variation in the degree of alutaceousness on the pronotum. In some specimens it is extremely fine, in others rather prominent. In some specimens the outline of the apex of the elytra is rather pointed, in others it is more broadly rounded. In one specimen the punctures of the scutellar striae are confused.
7a. Chaetocnema protensa splendida Gentner

Chaetocnema protensa splendida Gentner, 1924 (14, p.165)

DESCRIPTION. This variety agrees in every respect with protensa, except that the color of the elytra is a rich, deep blue. The scutellum is bronzed or brassy in the variety. The length and width fall within the range of protensa.

TYPE LOCALITY. East Lansing, Michigan (Gentner).
Described from a series of twenty specimens. The type is in the collection of the Entomology Department, Michigan State College.

DISTRIBUTION. Specimens have been examined from Colorado -- Garland; LaVeta, April 7; Michigan -- East Lansing, May 13, 1922, May 14, May 25, September 23, 1923, May 2, 1924 (Gentner); South Dakota; Canada -- Edmonton, Alberta, September 10, 1919 (Carr); Empress, Alberta, June 3, 1916 (Carr); Aweme, Manitoba, July 1, October 18, 1915 (Criddle); Stony Mountain, Manitoba, April 21, 1916 (Wallis); a total of fifty-one specimens.

FOOD PLANTS. Taken on marsh grass.

REMARKS. This is one of the prettiest of all North American species of Chaetocnema. It differs from the true protensa only in the deep blue color of the elytra. The tendency toward the blue coloration in the true protensa is seen in the bluish cast on the scutellum, on the region of the head between the bases of the antennae and the eyes,
on the front, and sometimes on the anterior and middle femora. One of the specimens has the punctuation in the scutellar striae confused. In the two specimens from Stony Mountain, Manitoba, Canada, the elytra are more of a greenish blue, and one from Aweme, Manitoba has the elytra more of a violet blue. Horn (20, p.259) mentioned a specimen from Garland, Colorado with greenish bronze elytra.

The variety occurs along with typical protensa on common marsh grass at the rate of about one to twenty-five at East Lansing, Michigan.

8. Chaetocnema brunnescens Horn

*Chaetocnema brunnescens* Horn, 1889 (20, p.259)

**DESCRIPTION.** Rather narrowly oval to broadly oval; pale reddish brown to rather dark reddish brown, the head, pronotum, and a line along the suture darker, surface with aeneous luster. Antennae pale rufotestaceous, sometimes with apical joint piceous. Head distinctly alutaceous; front with a few coarse punctures; vertex with moderate punctures, closely placed. Pronotum transverse, not quite twice as wide as long; sides arcuate, narrowed in front; basal marginal line entire, fine, containing fine punctures; surface densely alutaceous; punctures moderately coarse, closely, regularly placed, rather shallow. Elytra not wider at base than pronotum; humeri broadly rounded; umbones not prominent; striae slightly impressed on the
disc, more deeply at the sides, punctures moderately coarse, closely placed; intervals lightly convex, scarcely wider than striae, with a row of distinct fine punctures; surface from scarcely alutaceous to moderately so. Body beneath paler than above. Abdomen sparsely punctate, smooth. Legs entirely pale rufotestaceous, except outer sides of hind femora, which are darker. Males, length 1.60 to 1.68 mm.; width 0.84 to 0.88 mm. Females, length 1.84 to 2.00 mm.; width 0.96 to 1.00 mm.

TYPE LOCALITY. Key West, Florida (Schwarz). The type is in the collection of the Academy of Natural Sciences, Philadelphia.

DISTRIBUTION. Specimens have been examined from Florida -- Dunedin, March 17, 1919, April 11, 1921, April 2, 1923 (Blatchley); Key West, April (Schwarz); Miami (Bever); a total of twenty-eight specimens. Leng (29, p.301) gives the distribution as Florida. Specimens have not been reported from any other state.

REMARKS. This species is readily distinguished from other species by its reddish-brown color and distinctly, densely punctate vertex.
9. Chaetocnema denticulata (Illiger)

Haltica denticulata Illiger, 1807 (22, p.163)
Chaetocnema denticulata (Illiger), Crotch, 1873 (11, p.74)
Chaetocnema semichalchea Melsheimer, 1847 (34, p.167)
Hydropus americanus Motschulsky, 1860 (36, p.235)

DESCRIPTION. Somewhat broadly oval, robust; surface distinctly bronze or brassy, moderately shining. Antennae rufotestaceous at base, the apical five or six joints piceous. Head very densely alutaceous, dull; front moderately coarsely punctate, punctures usually very closely placed, with light colored hairs in unrubbed specimens; vertex rather finely to rather coarsely punctate, punctures well separated, usually with a median smooth space, and a smooth area above each eye. Pronotum one-half wider than long, widest at base; sides regularly arcuate, narrowing noticeably anteriorly; basal marginal line more or less distinct at sides; punctures moderately coarse, moderately closely placed, with a smooth median space toward the base; surface distinctly alutaceous. Elytra not wider at base than pronotum; sides of pronotum and of elytra nearly continuous; umbones not prominent; disc convex; punctures coarse and deep, not closely placed except in lateral striae; scutellar striae somewhat irregular in some specimens; intervals flat on disc, wider than striae, with a row of distant fine punctures, lateral intervals narrower, somewhat convex; surface finely alutaceous. Body beneath piceous, slightly
bronzed. First abdominal segment rather coarsely, closely punctate, others more finely, sparsely punctate. Anterior and middle femora dark brown, posterior femora piceous, bronzed; tibiae and tarsi rufotestaceous. Males, length 2.00 to 2.72 mm.; width 1.20 to 1.52 mm. Females, length 2.52 to 3.12 mm.; width 1.32 to 1.68 mm.

TYPE LOCALITY. Pennsylvania. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. This species is widely distributed throughout the United States. Specimens have been examined from Arkansas -- Fort Smith; Arizona; California -- Arapahoa, Yuba County, September 7, 1943 (McClay); Bishop, June 1, 1905; Castle Crag, July 23, 1898; Nicalous, Sutter County, June 22, 1944 (McClay); Ryde, July 11, 1941 (McClay); Sacramento, May 20, July 1, 1944 (McClay); Stockton, November 15, 1929 (McClay); Walnut Grove, May 15, 1930 (McClay); Colorado -- Colorado Springs; Florida -- Cedar Keys; Georgia -- Atlanta, August 6, 1948 (Fattig); Illinois -- Champaign, November 15, 1927 (McClay); Hillview, June 14, 1927 (McClay); Olive Branch, September 5, 1923 (Bryant); Pittsfield, Pike County, July 6, 1946 (McClay); Indiana -- Clark County, May 6, 1909; Daviess County (Reeves); Harrison County, June 23, 1934 (LaHue); Jackson County, August 6, 1938 (Schnell); Kosciusko County, August 1, 9, 1931, May 14, July 15, 1933 (Gould); Mishawaka, June 29, 1933 (Trippel); Putnam County, July 25, 1909; Tippicanoe
County, November 26, 1932, November 2, 1935; Iowa -- Ames, May 30, 1940 (Lindsay); Henry County, May 17, 1936 (Newby); Mount Pleasant, July 27, 1942 (Smith); Kansas -- Douglas County, July 22, 1919 (Hoffman); Lawrence, September 24, 1921 (Brown); Manhattan, September 1, 1925 (Smith); June 26, 1928 (Marshall); October 19, 1929 (Winburn); May 1, 1930 (Painter); March 17, October 21, 1932 (Smith); Riley County, May 25, June 17, July 3, 5, 26, 29, August 16 (Popenoe); July 28, 30 (Dean); Topeka, March 2, 1909 (Smyth); Wichita, November 10, 1916; Kentucky -- Elizabethtown, Hastings County, May 1, 1944 (Malkin); Louisiana -- Alexandria; Maryland -- Baltimore, June 13, 1909; Cabin John, May 19, 1915 (Roberts); Massachusetts -- Arlington, June 30, 1921; Chicopee, October 28, 1896, September 18, 1897, September 2, 1898, April 16, 1899; Framingham, February 6, 1938 (Frost); Lexington, August 31, 1921 (Frost); Sherborn, July 17, 1926 (Frost); Springfield, August 6, 1898; Michigan -- Benton Harbor, May 27, 1921 (Gentner); East Lansing, May 13, 1891; March 6, June 23, July 6,7,12,18, October 5,24,28, 1921, April 6,8, 1922, April 21, July 11, September 25, 1923, November 2, 1925 (Gentner); Fennville, August 4,11, 1926 (Gentner); Lawton, August 9,20, 1924 (Gentner); Mississippi -- Agricultural College; Missouri -- Columbia, October 2, 1939 (Enns); Fulton, July 10, 1939 (Enns); Nebraska -- Malcolm, March 18, 1910 (Oertel); New Jersey -- Belleplain, June 1, 1926; Hillsdale, July 2, 1922 (Quirsfeld); Oradell,
June 5, 1918; Phillipsburg, August 27, 1917; Wayne, July 14, 1925 (Schott); Westville, May 7 (Kemp); New York -- Little Neck, Long Island, November 11, 1917 (Schott); West Point, September 22; North Carolina -- Raleigh, December, 1902 (Sherman, Jr.); Ohio -- Mirror Lake, Columbus; Oklahoma -- Stillwater, July 13, 1935 (Stankavitch); Oregon -- Butte Falls, June 17, 1940 (Gentner); Central Point, May 29, 1952 (Gentner); Grants Pass, November, 1951 (Clark); Medford, May 6, 1936 (Gentner); Talent, May 13, 1939, May 20, 1941, June 28, 1944 (Gentner); Wilderville, Josephine County, August 15, 1949, July 24, 1952 (Gentner); Pennsylvania -- Philadelphia, July 26, 1930; Wind Gap, May 17, 1932 (Green); Tennessee -- Elmwood (Corse); Texas -- Dallas, October 16, 1927 (Bottimer); Harlingen, July 12, 1921 (Hull); Robstown, July 4, 1922; Virginia -- Lee County; Washington -- Walla Walla, May, 1940 (Lanchester); Washington, D. C. -- July 24, 1904 (Knab), July 1, 1915 (Roberts); Wyoming -- Sheridan; a total of four hundred twenty-six specimens. Leng (29, p. 301) gives the distribution as New England, Florida, Texas, Montana, California, and Indiana.

FOOD PLANTS. This species has been collected from pasture grass, alfalfa, wheat, oak, castor bean, Chepodium sp., and in numbers on knot grass.

REMARKS. This species has been given the common name of the toothed flea beetle (37, p. 130). From those species
with distinctly punctate vertex it may be easily distinguished by its larger size, rather broadly oval, robust form, and its rugosely punctate front, which is covered with whitish hairs in unrubbed specimens. Although it is widely distributed throughout the United States, it varies but little. Several specimens have the punctures in the sutural striae more or less confused.

Horn (20, p.317) and Leng (29, p.301) list three species of Chaetoconema as synonyms of denticulata -- semichalebea Melsheimer, americana Motschulsky, and texana Crotch.

Melsheimer described semichalebea in 1847 from specimens from Pennsylvania (34, p.167). Dr. P. J. Darlington recently made a search for the type of this species in the Melsheimer collection at the Museum of Comparative Zoology, but was unable to find a specimen labelled by that name. Since the type is not at present available, and since the characters given in the original description are not too definite in view of the larger number of species now on hand, it has been decided to let the matter stand as it is, for the present.

In 1860 Motschulsky described americana under the genus Hydropus from specimens taken near New York (36, p.235). A review of the description indicates that this species undoubtedly is the same as denticulata.

The species texana was described by Crotch in 1873 from specimens from Texas (11, p.74). An examination of
the type shows that this is definitely a valid species, and not the same as *denticulata*. The specific differences will be discussed under *texana*.

10. *Chaetocnema cribrifrons* LeConte

*Chaetocnema cribrifrons* LeConte, 1879 (28, p. 517)

**DESCRIPTION.** Form regularly oval, somewhat oblong; surface dark bronze or brassy, shining. Antennae rather slender, with six or seven basal joints rufotestaceous, apical joints piceous. Head rather shiny to finely alutaceous; punctures on vertex well impressed, varying from moderately fine to moderately coarse, widely separated to moderately closely placed; front smooth, punctures varying in size and number, usually fairly coarse and unevenly distributed. Pronotum four-fifths wider than long, very convex, narrowing noticeably anteriorly; surface very shiny, almost smooth to very finely alutaceous; basal marginal line distinct at sides; punctures moderate in size, somewhat elongate, moderately closely placed, with a median smooth space toward the base. Elytra not wider at base than pronotum, the curve nearly continuous; umbones faint; surface finely alutaceous; punctures not much coarser than those of pronotum, deeply and closely placed in widely separated striae, which are not impressed; intervals wide and flat. Body beneath piceous, bronzed or brassy. Abdomen coarsely, rather sparsely punctate. Anterior and middle femora dark
brown, posterior femora piceous, bronzed; tibiae and tarsi reddish brown. Males, length 2.08 to 2.68 mm.; width 1.16 to 1.60 mm. Females, length 2.12 to 3.08 mm.; width 1.24 to 1.68 mm.

TYPE LOCALITY. Alamosa, Colorado. Described from one specimen which is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Specimens have been examined from Arizona -- Douglas, August 23, 1933; Flagstaff, June (Cha); Oracle, July 27, 1924 (Van Duzee); Nogales, Santa Cruze County, August 17, 28, September 6, 1906 (Nunenmacher); Patagonia, August 1, 2, 1924 (Van Duzee); Santa Rita Mountains, September 8, 1925 (Bottimer); May 25 (Hubbard and Schwarz); Tucson, August 12, 1924 (Martin); Colorado -- Denver, July 10, 1939 (Green); Fort Collins, October 5, 1901; Rocky Mountain National Park, August 2, 1931 (Severin); Kansas -- Kearney County, July, 1921; Riley County, July 1; Montana -- Helena, September 5; Nebraska; New Mexico -- Jemez Mountains, July 2, 18, August 9, October 25 (Woodgate); Jemez Springs; South Dakota -- Newell, June 29, July 5, 1923 (Gilbertson); Texas -- Cotulla, April 17, 1906 (Pratt); Ivahoe, Fannin County, June 26, 1922 (Wheeler); Uvalde, July 11, 1941 (Barr); Wades, January 22, May 22 (Hubbard and Schwarz); Canada -- Medicine Hat, Alberta, April 8, June 14, 1923, April 7, 1924 (Carr); a total of forty-seven specimens.
Horn (20, p.261) gives the distribution as Colorado, Texas, Dakota, Georgia, and California (Ulke). An examination of the Georgia specimen in the Horn collection showed this to be *floridana* Blatchley. No specimens have been examined from California.

Leng (29, p.301) gives the distribution as Georgia, Texas, California, Indiana. Specimens have not been examined from Indiana, but Blatchley (7, p.1210) listed it as occurring in Lake, Marshall, Putnam, and Orange counties, scarce. He stated: "Resembles *denticulata* very closely, but less broad, and with the punctures of the clypeus very coarse, deep and well separated". It is doubtful whether the species to which he refers is *cribrifrons* since there is no close resemblance between the two species.

**REMARKS.** From other species with distinctly punctate vertex this species is separated by the shiny pronotum and the widely separated striae, with wide, flat intervals. It is possible that the specimens now placed under *cribrifrons* may sometime be separated into two or more species, when it has been possible to examine larger series from a given locality. Most of the collections were only of one or two specimens. A series of ten specimens from the Atlantic states, which formerly was classified as this species, is considered to be a distinct species and is being described as *frosti*. 
11. Chaetocnema floridana Blatchley

*Chaetocnema floridana* Blatchley, 1923 (9, p.33)

**DESCRIPTION.** Elongate oval, strongly convex, relatively slender, tapering behind; color black with brassy tinge. Antennae with basal joints reddish brown, apical joints dark. Head finely alutaceous; vertex rather coarsely, sparsely and deeply punctate; front with a few coarse, deep punctures. Pronotum about one-half wider than long, convex; sides declivent, their margins rounded, narrowed anteriorly; surface finely alutaceous, rather finely, evenly, not densely punctate; basal marginal line fine, obsolete at middle. Elytra not wider at base than pronotum, outline narrowly oval, distinctly tapering behind middle; striae scarcely impressed, marked with coarse, well spaced punctures; intervals very narrow, slightly convex, not visibly alutaceous or punctate. Body beneath piceous, brassy. Ventral abdominal segments each with two or three irregular, transverse rows of fine, deep punctures, the last one sparsely, irregularly, rather coarsely punctate. Anterior and middle femora, tibiae and tarsi, dark reddish brown, posterior femora piceous, bronzed. Length 2.00 to 2.24 mm.

**TYPE LOCALITY.** Described from seven specimens taken at Dunedin and Lakeland, Florida, February 16 - April 24. In collection of Entomology Department, Purdue University.

**FOOD PLANTS.** Taken on huckleberry and other low
vegetation in open pine woodlands.

DISTRIBUTION. This species occurs in Florida and two specimens have been examined from Georgia. Leng and Mutchler (30, p.46) give the distribution as Florida.

REMARKS. From those species with distinctly punctate vertex and coarse punctures on the front, it can be separated by its more narrowly oval form, definitely tapering to apex. Blatchley stated (9, p.33) that it is "very different from cibrifrons in its smaller, narrower, more tapering form, less densely punctate thorax, narrower, impunctate last ventral of abdomen".

12. Chaetocnema frosti new species

The detailed description of this species is given in a manuscript, which is being prepared for publication in the near future.

13. Chaetocnema pinguis LeConte

Chaetocnema pinguis LeConte, 1878 (26, p.417)

DESCRIPTION. Broadly oval, slightly oblong, more pointed behind, convex; color black, with brassy bronze luster, feebly shining. Antennae with basal joints testaceous, apical joints darker. Head finely, densely alutaceous; punctures on vertex very fine, well separated; front pubescent, with moderately coarse punctures, closely placed. Pronotum prominent, less than one-half wider than long; sides nearly straight, prominently rounded at front
angles; surface finely alutaceous; punctures very fine, somewhat closely placed, with a narrow, smooth median space basally; basal marginal line fine, distinct only at the sides, with a row of coarser basal punctures at the sides; elytra not wider at base than pronotum; sides arcuate, tapering more rapidly behind middle; umbones not prominent; surface finely alutaceous; punctures rather small, somewhat closely placed, striae faintly impressed, fairly widely separated, almost obsolete toward apex; intervals flat on disc, slightly convex on sides. Under side piceous, shining, feebly bronzed. Ventral segments of abdomen sparsely, finely punctate, the last segment more coarsely and closely punctate at the sides. Anterior and middle femora dark reddish brown, posterior femora piceous, bronzed; tibiae and tarsi rufotestaceous. Length 1.92 to 2.20 mm.; width 1.08 to 1.20 mm.

TYPE LOCALITY. New Smyrna, Florida. Described from two specimens from New Smyrna and Enterprise, Florida. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Specimens have been examined from
Florida — Dunedin, March 29, 1918; New Smyrna, March 6;
Georgia; Kansas — Riley County, July 22 (Pape); July 30 (Dean); Mississippi — Oon Springs (Weed); North Carolina; Texas; a total of fifteen specimens.

Horn (20, p.261) and Leng (29, p.301) give the
distribution as Florida, North Carolina, and Texas. Blatchley (7, p.1211) reported it from Lawrence County, Indiana.

REMARKS. The form is rather short and broad, more pointed behind; the punctures on the vertex are very fine, but distinct; the pronotum is prominent, with rather straight sides, and prominently front angles, the punctuation fine. The striae are widely separated, faintly impressed, almost obsolete toward apex.

14. Chaetocnema texana Crotch

Chaetocnema texana Crotch, 1873 (11, p.74)

DESCRIPTION. Form rather narrowly oval, pronotum and elytra separately convex, narrowed at apex; color black, not strongly shining; pronotum with brassy luster; elytra with bronze luster. Antennae with five basal joints rufo-testaceous, apical joints piceous. Head very densely alutaceous, subopaque; punctures on vertex extremely fine, well spaced; front lightly pubescent, punctures not coarse, but closely placed. Pronotum about one-third wider than long, widest at middle; sides regularly arcuate to front and rear; surface densely alutaceous, very finely, not deeply, not distinctly, closely punctate; basal marginal line very fine, visible at sides only, some coarser punctures along base, a small median smooth space basally. Elytra wider at base than pronotum; humeri broadly rounded, umbones not
prominent; sides arcuate, tapering sharply on apical third; sides of pronotum and of elytra separately arcuate; surface faintly alutaceous, somewhat shining; punctures moderately coarse, not deep, striae not impressed on disc, almost obliterated toward apex; intervals flat on disc, moderately wide, narrower and convex at sides. Body beneath shining, with brassy luster. Abdomen with first ventral segment rather coarsely, shallowly punctate, remaining segments more finely punctate. Anterior and middle femora dark brown, bronzed, posterior femora piceous, bronzed; tibiae and tarsi rufotestaceous. Length from slightly under to slightly over two millimeters. Two specimens in the writer's collection measure: male, length 2.08 mm.; width 1.12 mm.; female, length 2.16 mm.; width 1.16 mm. A male from Del Rio, Texas, measures, length 2.00 mm.; width 1.04 mm.

TYPE LOCALITY. Texas. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Specimens have been examined from Texas -- Brownsville, January 17, 1923 (Bottimer); Del Rio, July 23, 1924 (Wickham); Kingsville, January 30, 1923 (Bottimer). So far this species has not been recorded from any other state.

REMARKS. Horn (20, p. 317) and Leng (29, p. 301) have listed texana as a synonym of denticulata (Illiger). An examination of the type shows this species to be quite
distinct from denticulata in its more narrowly oval form, much finer, less distinct punctuation of the vertex and pronotum, its separately convex disc of the pronotum and of the elytra, its separately arcuate sides of the pronotum and of the elytra, and its smaller size. Therefore texana is restored to the standing of a valid species.

In denticulata the form is more broadly oval, pronotum widest at base, outline of pronotum and of elytra nearly continuous, the punctuation on the vertex, pronotum, and elytra more distinct, disc of pronotum and of elytra not separately convex, and size larger.

From pinguis to which it is most closely related, texana is separated by its more elongate oval form, its separately arcuate sides of pronotum and of elytra, more finely, less densely punctate vertex and pronotum, and longer elytra, as compared to length of pronotum.

15. Chaetocnema aemula Horn  
Chaetocnema aemula Horn, 1889 (20, pp.261,262)  
DESCRiPTION. Oval, rather robust; surface shining, slightly brassy. Antennae rufotestaceous at base, piceous apically. Head alutaceous; vertex finely punctate, punctures widely separated; front pubescent, very distinctly, not densely punctate. Pronotum one-half wider than long, widest a little in front of base; sides arcuately narrowing to the front; basal marginal line very indistinct at
the sides; surface very finely alutaceous; punctures rather fine, closely placed. Elytra a little wider at base than pronotum; humeri broadly rounded; umbones not prominent; striae slightly impressed, punctures moderately coarse, close, and deep; intervals very little wider than striae, very slightly convex on disc, more so at sides, the interstrial punctures indistinct and very fine. Body beneath piceous, slightly bronzed. Abdomen coarsely, but sparsely punctate. Femora piceous; tibiae and tarsi rufotestaceous. Length 2.25 mm. A female from White Mountains, Arizona, measures 2.48 mm. in length and 1.28 mm. in width.

TYPE LOCALITY. Arizona, probably Fort Thomas. Described from one specimen. The type is in the collection of the Academy of Natural Sciences, Philadelphia.

DISTRIBUTION. The writer has seen only one specimen of this species beside the type. This is a specimen from the Schaeffer collection from Diamond Creek, White Mountains, Arizona (Duncan). It agrees very well with Horn's description. Horn (20, p.262) and Leng (29, p.301) give the distribution as Arizona.

REMARKS. From pinguis and texana, to which it is closely allied, it is distinguished by the more distinct, more closely placed punctures of the pronotum and the impressed elytral striae, which do not tend to become obliterated toward the apex, as is the case in the other two species. In aemula the sides of the pronotum and elytra
are separately rounded, while in *pinguis* they are continuous with each other. The elytra are much more prominent in proportion to the pronotum, and more broadly rounded than they are in *texana*.

16. *Chaetocnema opacula* LeConte

*Chaetocnema opacula* LeConte, 1878 (26, p. 418)

**DESCRIPTION.** Form somewhat elongate oval; color deep black, slightly bronzed; vertex and pronotum opaque, dull; elytra somewhat more shiny. Antennae black, except for three basal joints, which are reddish brown below. Head very dull, opaque; vertex extremely finely, indistinctly punctate, punctures well separated; front with coarser, closely placed punctures. Pronotum about one-half wider than long, widest at base; sides broadly arcuate, distinctly narrowed in front; surface opaque, dull, with rather fine, closely placed punctures, and with an irregular row of coarser punctures in front of base; basal marginal line indistinct. Elytra a little wider at base than pronotum; sides regularly arcuate, narrowing behind middle; humeri broadly rounded; umbones prominent; surface densely, finely alutaceous, slightly more shining than pronotum; striae slightly impressed, composed of moderately coarse, closely placed, subtransverse punctures; intervals narrow. Body beneath piceous, slightly bronzed. Abdomen with ventral segments somewhat shining, moderately closely punctate,
the first segment rather coarsely, the others more finely. Femora piceous; tibiae and tarsi dark brown. Males, length 1.56 to .184 mm.; width 0.88 to 1.00 mm. Females, length 1.72 to 2.12 mm.; width 0.92 to 1.16 mm.

TYPE LOCALITY. Gilroy, California. Described from one specimen with only two basal joints of antennae remaining. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Specimens have been examined from California -- Alameda, June 2, 1904 (Nunenmacher); Clear Lake, April 22, 1928 (McClay); Forrestville, April 4, May 11, 20, 1936, May 17, 1937, April 6, 12, 18, May 19, 1938 (McClay); Freeport, May 29, 1941 (McClay); Grass Valley, September 19, 1930 (McClay); Newcastle, March 4, 1936 (McClay); Colorado -- Garland, June 18; Nevada -- Elko (Wickham); a total of ninety-one specimens.

Horn (20, p.262) gives the distribution as California (Gilroy) and Colorado?. He stated that there is a specimen in Mr. Schwarz's collection from Alamosa, Colorado, with more shining elytra and less distinct basal punctures, which he is unwilling to separate from opacula. Leng also gives the same distribution (29, p.301). According to specimens examined by the writer this species occurs in California, Colorado, and Nevada.

REMARKS. This smaller species is readily recognized by its deep black, dull appearance, the head and pronotum
being definitely opaque, and the elytra slightly more shining to a varying degree. The punctures on the vertex are very indistinct, and the rather finely, closely punctate pronotum contrasts sharply with the rather coarsely punctate elytra.

17. Chaetoenerna minuta Melsheimer

Chaetoenerna minuta Melsheimer, 1847 (34, p.167)

Chaetoenerna parcepunctata Crotch, 1873 (11, p.74)

Chaetoenerna paupercula Casey, 1884 (10, pp.53,54)

DESCRIPTION. Rather broadly oval, very convex, sides of pronotum and of elytra separately arcuate, color piceous with bronze or brassy luster, more or less shining. Antennae with four or five basal joints brownish testaceous and apical joints piceous. Head distinctly alutaceous; vertex very finely, indistinctly punctate, punctures irregularly placed and widely separated; front with coarser, shallow punctures. Pronotum slightly more than one-half wider than long; sides arcuate, widest at middle, very little narrower in front than at base; surface faintly to distinctly alutaceous; punctures fine, well separated, a row of irregularly placed coarser punctures near basal margin, widening toward middle. Elytra distinctly wider at base than pronotum; disc very convex; sides broadly arcuate, tapering somewhat toward apex; humeri broadly rounded; umbones moderately prominent; surface finely alutaceous; striae faintly
impressed, the punctures moderately coarse and closely placed; intervals somewhat wider than the striae. Body beneath piceous, faintly bronzed. Abdomen sparsely punctate. Legs piceous, with tibiae and tarsi more or less lighter in color. Males, length 1.60 to 1.84 mm.; width 0.88 to 1.04 mm. Females, length 1.64 to 2.16 mm.; width 0.92 to 1.28 mm.

TYPE LOCALITY. Pennsylvania. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. This species has a rather wide distribution. Specimens have been examined from Arizona; Colorado -- Garind (not typical); Connecticut -- Cornwall, May 14, September 30, 1920, March 5, 1921, May 12, 1922, January 12, 1923 (Chamberlain); Florida -- Enterprise (Hubbard and Schwarz) (not typical); Lake Placid, February 19, 1947 (Needham); Indiana -- La Grange County, August 16, 1933 (Trippel); South Bend, July 27, 1926 (Gentner); Wabash County, August 5, 1935; Iowa -- Ames, April 26, 1948 (Blickenstaff); Henry County, May 17, 19, 1936 (Cordner); Iowa City, April 21, 1895, September 14 (Wickham); Mount Pleasant, April 14, 1939 (Hoelzen); Louisiana; Maine -- Paris, July 10, 1915 (Frost); Massachusetts -- Berlin, July 1, September 9, 1939, June 18, 1940 (Frost); Cambridge, May, 1871; Chicopee, April 12; 14, 1895, May 5, 1897; Fall River, January 24, 1912, March 1, 1913 (Easton); Medford, June 20, 1921; Monterey, July 15, 1919; Sherborn, May 21,
1932 (Frost); Southboro, May 21, 1922, July 4, 1926 (Frost); Michigan -- Detroit, May 28, August 1 (Hubbard and Schwarz); East Lansing, May 13, 1891, July 14, 1893; April 4, 5, July 12, October 24, 28, 1921, April 4, 6, 8, 21, May 5, 7, 26, July 15, October 27, 1922, April 28, May 2, July 5, 11, 12, 19, September 25, 1923, May 2, 12, 16, 28, 1924, April 20, 1926 (Gentner); Fennville, August 4, 1926 (Gentner); Mentha, August, 1928 (Gentner); New Baltimore, McComb County, June 17, 1944 (Malkin); Selfridge Field, July 1-10, 1944 (Malkin); Washtenaw County, July 23, 1922 (Hatch); New Hampshire -- Hampton, May 18 (Shaw); Walpole, May 31, 1920 (Barnstead); New Jersey -- Hillsdale, June 24, 1921, July 2, 1922, November 12, 1933 (Quirsfeld); New York -- Ithica (Chittenden); Mount Whiteface, July 7, 1922 (Aldrich); Onandago County, May 23, 1923 (Hatch); Port Ontario, July 19, 1936 (Green); North Carolina; Pennsylvania -- Easton, July 28, 1918 (Green); Pocono Lake, August 13 (Green); Texas -- Liberty, August 1, 25, 1922 (Bottimer); Seabrook, August 2 (Green); Smith Point, July 25, 1922 (Bottimer); Washington, D. C. -- July 8, 21, 22, 1915 (Roberts); West Virginia -- White Sulphur, August; Wisconsin -- Cranmore, July 20, 1911; Madison, May 1, 19, 21, 25, 1920 (Gentner); Rhinelander, October 16, 1917 (Ball); Waupaca, June 9, 1920 (Gentner); a total of two hundred forty specimens.

REMARKS. This species is readily recognized by its very convex form, indistinctly punctate vertex, finely punctate pronotum with contrasting coarsely punctured elytra, separately rounded sides of pronotum and of elytra, and prominent, much wider disc of the elytra as compared to that of the pronotum. The elytra taper somewhat toward the apex, especially in the males. Several specimens have the punctures somewhat confused in the scutellar striae. The degree of alutaceousness varies considerably even in specimens of a series collected on the same day and in the same locality, and there is a noticeable difference in size. The specimens from Enterprise, Florida and Smith Point, Texas are not typical and may some day be separated from this species, when a larger series is available.

Horn (20, p.262) stated that this species had escaped the notice of both Crotch and LeConte, and that his description was written up from the type in the Museum at Cambridge, which was in good condition, in comparison with other specimens. In this description he stated that the thorax is twice as wide as long, whereas actual measurements show it to be only a little more than one-half wider than long.
An examination of Crotch's type of *parcepunctata* in the collection of the Museum of Comparative Zoology, Cambridge, shows this to be very similar to *minuta*. Crotch very briefly described it in 1873 from Pennsylvania and Lake Superior (11, p. 74). His description gave the head as alutaceous, but smooth (without punctures). The indistinct punctures on the vertex could easily have been overlooked by Crotch; however, in Horn's key to the species of *Chaetocnema* (20, p. 255), this was the only definite character that separated *minuta* from *parcepunctata*. In his remarks under *minuta* Horn (20, p. 263) stated: "*C. parcepunctata* also closely resembles it, but the head is entirely devoid of punctures, but it is possible that future collections may make it necessary to unite them". Then in his remarks under *parcepunctata* he stated: "As already stated this species is so closely related to *minuta* in form, size, and color, the sculpture is also nearly identical, except that here the head is impunctate". The lack of punctures on the head (vertex) appeared to be the main distinguishing character. In *minuta* the punctures of the vertex are very fine and indistinct, and can easily be overlooked. The writer has never found a specimen with absolutely impunctate vertex among the large number of specimens examined, both among those labelled as *minuta* and as *parcepunctata*. A series of twelve specimens borrowed for study from the United States National Museum collection, which were
labelled *parcepunctata*, all had an indistinctly punctate vertex and showed no greater differentiation from *minuta* than could be found in a series of *minuta* from a given locality. Dr. P. J. Darlington again made an examination of the type of *parcepunctata* to check this point, and reported the vertex to be finely punctate. Since this eliminates the one definite difference between the two species, and since both occur over the same range, *parcepunctata* must be considered the same as *minuta*.

*Chaetoecnema paupercula* was described in 1884 by Casey (10, pp.53,54) from one immature specimen with warped elytra, from Willets Point, Long Island, New York. The important points in the description agree very well with *minuta*, therefore *paupercula* is also placed as a synonym of *minuta*.

18. *Chaetoecnema bicolor* Gentner

*Chaetoecnema bicolor* Gentner, 1928 (15, pp.63,64)

DESCRIPTION. Broadly oval, robust, very convex; decidedly shining; color black; head and pronotum with aeneous luster; elytra dark blue. Antennae slender, little thickened to apex, pale yellowish brown, sometimes with the last joint fuscous at tip. Head very shining; vertex smooth, indistinctly rugulose. Pronotum three-fifths broader than long, much narrower in front; sides feebly arcuate, nearly straight; frontal and basal margins broadly arcuate;
surface very faintly alutaceous, finely, sparsely punctate, the punctures elongate, widely separated, and quite regularly spaced; basal marginal line indistinct at middle, defined at each side by a row of small, indistinct punctures. Elytra scarcely wider at base than pronotum; humeri broadly rounded; umbones feeble; sides broadly rounded to apex, somewhat subparallel on middle third, surface scarcely visibly alutaceous; striae regular, feebly impressed on disc, punctures round, coarser than those of pronotum, separated by their own diameters; intervals wide with extremely fine, irregularly placed punctures. Abdomen beneath shining, with the first segment punctate at middle, and with a row of widely separated, indistinct punctures near the posterior margin of each of the other segments. Anterior and middle femora dark brown, with lighter apexes, posterior femora piceous; tibiae and tarsi yellowish brown. Length 2.06 to 2.37 mm.; width 1.37 to 1.50 mm.

TYPE LOCALITY. Nogales, Santa Cruz County, Arizona, August 28, 1906 (Nunenmacher). The type, a male, is in the collection of the United States National Museum. Described from a series of eight specimens all taken at Nogales, Arizona during August and September, 1906 (Nunenmacher).

DISTRIBUTION. No other specimens of this species than those in the type series have been seen by the writer. Leng and Mutchler (30, p.46) give the distribution as Arizona.
REMARKS. This distinct species may readily be separated from other North American species by its blue elytra, broadly oval, robust form, smooth, strongly shining appearance, impunctate vertex, and slender antennae, which thicken very little toward the apex.

19. *Chaetocnema bottimeri* new species

The detailed description of this species is given in a manuscript, which is being prepared for publication in the near future.

20. *Chaetocnema gentneri* Csiki

*Chaetocnema parvula* Gentner, 1928 (15, pp.62,63)
*Chaetocnema gentneri* Csiki, 1940 (19, p.402)

DESCRIPTION. Elongate oval, moderately convex; black, shining. Antennae rufous. Head finely and densely alutaceous, moderately shining; vertex impunctate, except for a few coarse punctures near each eye. Pronotum three-fifths wider than long, subquadrate, scarcely narrowed anteriorly; front angles somewhat thickened, without post-apical angulations; posterior angles slightly rounded to base; surface finely and densely alutaceous, with a faint aeneous luster; distinctly, relatively densely, and moderately coarsely punctate, with punctures well separated, somewhat unevenly spaced, and becoming coarser toward the base; basal marginal line fine, but distinct. Elytra scarcely wider at base than pronotum; humeri not prominent; umbones faint; sides
regularly arcuate, widest a little in front of middle, tapering moderately to apex; surface scarcely visibly alutaceous, strongly shining; punctures not coarser than those of pronotum, if as coarse, separated in the striae by at least their own diameters; striae well spaced, impressed only near the suture and lateral margins; intervals flat, not visibly punctate. Abdomen beneath shining, finely, sparsely punctate. Legs rufous, except posterior femora, which are piceous. Length 1.24 mm.; width 0.68 mm.

TYPE LOCALITY. Nogales, Santa Cruz County, Arizona, July 17, 1906 (Nunenmacher). Described from one male specimen. The type is in the collection of the United States National Museum.

DISTRIBUTION. The type is the only specimen known to the writer. Leng and Mutchler (30, p.46) give the distribution as Arizona.

REMARKS. This species and obesula are the two smallest species of North American Chaetocnema known to the writer. It may readily be distinguished from all others by its small size, rather narrowly oval form, quite densely punctate, alutaceous pronotum, which contrasts with the shining elytra. The only species approaching it in size is obesula, which has a barely perceptibly punctate pronotum, dark appendages, and a more robust, broadly oval form, obesula being close to three-fifths as wide as long, while bentneri is only slightly over one-half as wide as long. The head
of *gentneri* has a faint reddish or brownish bronze luster, the pronotum a dull aeneous or slightly brassy luster, while the elytra are deep black.

This species was described by the writer as *parvula* in 1928 (15, p.62,63). In 1940 (19, p.402) Csiki gave it the new name *gentneri*, because the name *parvula* had been used by Baly in 1877 for a species of *Chaetocnema* from Ceylon (3, p.310).

21. *Chaetocnema alutacea* Crotch

*Chaetocnema alutacea* Crotch, 1873 (11, p.74)

**DESCRIPTION.** Narrowly oval, very convex; surface sub-opaque, dull, black, with bluish or olive green luster, distinctly alutaceous; appendages coarse. Antennae with basal and five apical joints piceous, the others reddish brown. Head densely alutaceous, dull; vertex impunctate, except for a few punctures near each eye. Pronotum one-half wider than long; sides arcuate, little narrowed to the front, very convex; basal marginal line distinct and entire; surface densely alutaceous, subopaque; punctures quite coarse, deep, and closely placed, somewhat less so on center of disc. Elytra not wider at base than pronotum; humeri obliquely rounded, umbones not prominent; surface finely, densely alutaceous, a little more shining than that of pronotum; striae distinctly impressed, composed of very coarse, deep, closely placed punctures; intervals
convex, narrow, with very fine punctures. Body beneath piceous, with faint aeneous or bronze luster. Abdomen moderately shining, moderately punctate. Legs entirely piceous. Males, length 1.64 to 2.08 mm.; width 0.84 to 1.04 mm. Females, length 2.00 to 2.48 mm.; width 1.04 to 1.36 mm.

TYPE LOCALITY. Florida. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Specimens have been examined from
Florida -- Baldwin, June 1, 10, 11; Cleveland, April 25, 1921; Lake Ashby, January 6; MacDill Field, Tampa, May 30, 1943 (Malkin); Georgia -- Moultrie, April 29, 1938 (Fattig); Tifton (Griffith); Mississippi -- Lucedale, June, 1924 (Musgrave); a total of forty-four specimens.

Horn (20, p.263) gives the distribution as from northern Georgia to Florida. Leng (29, p.301) gives the distribution as Florida, Georgia.

REMARKS. This species is readily known by its quite opaque surface, coarse sculpture, and entirely piceous legs. The vertex is impunctate. Its form is rather elongate oval and it is very deeply convex. It is most closely related to blatchlevi, which also has piceous legs. From this it is distinguished by its narrower form and the relatively longer elytra in comparison to the length of pronotum. In alutacea the length of the elytra is two and one-half times the length of the pronotum, while in
**blatchlevi** it is only about two times as long.

22. *Chaetoconema blatchlevi* Csiki

*Chaetoconema robusta* Blatchley, 1923 (9, p.33)

*Chaetoconema blatchlevi* Csiki, 1940 (19, p.401)

DESCRIPTION. Oblong oval, convex, very robust for the genus; surface black, subopaque, with faint brassy tinge. Antennae entirely piceous brown. Head finely, densely alutaceous, subopaque; without punctures on vertex. Pronotum slightly more than one-half wider than long, slightly widest at middle; sides broadly curved, scarcely narrower in front, subquadrate; disc densely alutaceous, moderately coarsely, deeply, rather closely punctate; basal marginal line entire. Elytra not wider at base than pronotum; humeri scarcely evident; umbones not prominent; striae distinctly impressed, composed of coarse, closely placed punctures; intervals finely alutaceous, with minute punctures. Body beneath black, moderately shining. Abdomen rather finely, sparsely punctate. Femora piceous; tibiae and tarsi dark brown. Males, length 2.32 to 2.40 mm.; width 1.28 to 1.32 mm. Females, length 2.44 to 3.00 mm.; width 1.40 to 1.68 mm.

TYPE LOCALITY. Described from numerous specimens taken on Hog Island, opposite Dunedin, Florida. The type is in the collection of the Entomology Department, Purdue University.
FOOD PLANTS. *Batis maritima.*

DISTRIBUTION. Specimens have been examined from
Florida -- Dunedin, April 1, 1916, March 28, 1917; Hawk
Beach; Georgia; a total of sixteen specimens.

Leng and Mutchler (30, p.46), under robusta, give the
distribution as Florida. Blatchley in his remarks under
robusta (9, p.33) stated that Mr. Fall had specimens in his
collection from Mobile, Alabama and Tybee Island, Georgia.
The known distribution then would be Alabama, Florida, and
Georgia.

REMARKS. This species is distinguished by its oblong
oval, robust form, its black, subopaque appearance, uni-
formly dark antennae, dark legs, and coarse punctuation.
Its eyes are rather widely separated, its pronotum is quite
prominent, and its elytra are rather short in comparison to
the length of the pronotum. It is most closely related to
alutacea from which it is readily separated by its oblong
oval form, uniformly dark antennae, and shorter elytra.

Blatchley described this species in 1923 as robusta
(9, p.33). In 1940 Csiki (19, p.401) gave it the new name
blatchleyi, because robusta already had been used by Baly
in 1877 for a species from Brazil (21, pp.171,172).

23. Chaetoecema subviridis LeConte

Chaetoecema subviridis LeConte, 1859 (25, p.27)

DESCRIPTION. Oval, robust; surface shining to
moderately shining, brassy green to bluish green, sometimes blackish, with brassy luster. Antennae with basal joints rufotestaceous, sometimes tipped with brown, outer six or seven joints piceous. Head finely alutaceous; vertex impunctate, except for a few coarse punctures near each eye. Pronotum about three-fourths wider than long; sides feebly arcuate, narrower in front; basal marginal line fine and entire; surface from rather shining, very finely alutaceous, to moderately dull, densely alutaceous; punctures moderately coarse to coarse, deep and closely placed, with a median smooth space near the base. Elytra not wider at base than pronotum; humeri obliquely rounded; umbones moderately prominent; striae not deeply impressed, punctures not much coarser than on pronotum, finer toward apex, punctures in scutellar striae confused; intervals slightly convex, wider than striae, with distinct, very fine punctures. Body beneath piceous, with faint greenish, bluish, or brassy luster. Abdomen not coarsely, but rather closely punctate, except at middle of last segment. Femora piceous, bronzed; tibiae either entirely rufotestaceous, or brown at apex; tarsi from rufotestaceous to brownish. Males, length 2.16 to 3.24 mm.; width 1.12 to 1.72 mm. Females, length 2.48 to 3.60 mm.; width 1.40 to 1.92 mm.

TYPE LOCALITY. Fort Laramie, Wyoming. The type is in the collection of the Museum of Comparative Zoology, Cambridge.
DISTRIBUTION. Specimens have been examined from
Arizona -- Flagstaff (Fenyes); California -- Barstow; Bishop,
Inyo County (Fenyes); Cedarville, July 3, 1935 (Schuh);
Dutch Flat, San Jacinto Mountains, June 15, 1940; Inyo
County, May 19, 1937; Keen Camp, Riverside County, June
6-12, 1917 (Van Duzee); Laguna Mountain, August 24, 1924
(Martin); Lone Pine, Inyo County, June 21, 1937; Olancho,
Inyo County, June 8, 1929 (Usinger); Palomar, August 2,
1905 (Field); San Bernardino Mountains (Fall); San Diego
County, Paloma Meadow, June 24, 1928 (Searl); Colorado --
Alamosa, August 6, 1903; Colorado Springs, June 15-30,
1896 (Wickham); Conejos County, July 17, 1932; Costilla
County, July 19, 1932; Garland, June 18, 22; Gunnison,
July 1; LaVeta; Lonetree, June 1, 1934 (Rotger); Pagosa
Springs; Trujillo, June 14, 1934 (Rotger); Idaho -- Hot
Springs, Owyhee County, July 16, 1948, July 17, 1949, July
4, 1951 (Barr); Iowa -- Dickinson, June 16, 1938 (Berger);
Kansas -- Geary County, June 19 (Wilbur); Riley County,
June 10 (Marlatt), June (Popenoe), June 27 (Dean); Topeka
(Popenoe); West Kansas (Popenoe); Montana; Nebraska --
West Point; Nevada -- Reno, March 5, 1941 (LaRivers); New
Mexico -- Albuquerque; Jemez Mountains, July 3, 18, 24,
August 8 (Woodgate); Springer; Tusas, August 1, 1933;
Oregon -- Albert Lake, July 2, 1935 (Schuh); Narrows, July
1, 1906; South Dakota -- Aberdeen, June 25, 1906; Brown's
Valley, June 23, 1927 (Gilbertson); Clear Lake, July 6,
1930 (Bushland); Florence, June 2, 1939 (Severin); Fort Thompson, June 21, 1944 (Severin); Houghton, June 25, 1930 (Gilbertson); Iona, June 25, 1931 (Severin); Lakeview, June 20, 1930 (Gilbertson); Lockwood (Gilbertson); Martin, June 27, 1937 (Severin); Mitchell, June 18, 1919 (Gilbertson); Parmalee, June 18, 1927 (Gilbertson); Rapid City, June 25, 1923 (Gilbertson); Springfield, June 15, 1928 (Gilbertson); Volga; Wabay, June 22, 1936 (Severin); White River, June 21, 1931 (Severin); Whitewood, July 8, 1923 (Gilbertson); Texas -- Green Valley, Brewster County, July 14, 25 (Green); Utah -- Cedar City, June 22, 1933 (Sweezey); Ogden; Pinto; Vineyard, July 5 (Spalding); Canada -- Awerne, Manitoba, June 20, 1914 (Criddle); a total of two hundred ninety-one specimens.

Horn (20, p. 264) gives the distribution as Kansas, Colorado, Montana, Arizona, and California (Owen's Valley). Leng (29, p. 301) gives the distribution as Southern California, Kansas, California.

REMARKS. This is the largest species of Chaetocnema known in our fauna, although the size is quite variable. Typical specimens are readily recognized by the brassy green color, although specimens occur which are bluish green or piceous, with brassy luster. In most specimens the punctures in the scutellar striae are confused, although some specimens occur with the punctures regular. The surface of the pronotum varies from quite shiny,
scarcely alutaceous, to moderately dull and densely alutaceous. When viewed from above, the eyes are not prominent, fairly widely separated, the distance between the eyes more than one-half the width of head across the eyes. It is distinguished from opulenta, to which it is most closely related, by its color, confused punctuation of sutural striae, less prominent, more widely separated eyes, and somewhat more tapering elytra.

24. Chaetocnema opulenta Horn

**Chaetocnema opulenta** Horn, 1889 (20, p.264)

**DESCRIPTION.** Oblong oval, moderately convex; surface shining, bright golden or brassy bronze. Antennae with basal joints rufotestaceous, apical joints gradually darker. Head slightly alutaceous; vertex feebly wrinkled. Pronotum about twice as wide as long; sides regularly arcuate, narrowed in front; basal marginal line well marked, entire; surface shining, scarcely alutaceous; punctures moderately coarse, deep and moderately closely placed. Elytra a little wider at base than pronotum; humeri obtusely rounded; umbones moderately prominent; sides somewhat subparallel on middle third, broadly rounded to apex; disc subconvex; striae feebly impressed, punctures very coarse, deep, and closely placed; intervals not wider than striae, distinctly punctulate. Body beneath distinctly aeneous. Abdomen moderately coarsely, rather densely punctate. Femora
piceous; tibiae and tarsi rufotestaceous. Males, length 2.08 to 2.68 mm.; width 1.12 to 1.44 mm. Females, length 2.32 to 3.00 mm.; width 1.24 to 1.68 mm.

TYPE LOCALITY. Lectotype, Nevada, 1 paratype, Nevada, 2 paratypes, California, in collection of the Academy of Natural Sciences, Philadelphia.

DISTRIBUTION. Specimens have been examined from
Arizona -- Diamond Creek, White Mountains, June (Duncan);
California -- Bishop, June 4, 1905; Cole, July 2, 1904;
Goose Lake, Modoc County, July 24, 1922 (Fox); Los Angeles;
Mountain Spring, August 23, 1924 (Van Duzee); Niles Canyon,
September 16 (Giffard); Riverside, May 21, 1930; San
Bernardino Mountains (Fall); Santa Clara; Sespe Canyon,
Ventura County, September 11, 1931 (Barrett); Siskiyou
County (Tallac); Watsonville, March 9, 1936 (McClay);
Colorado -- Denver; Garland; Idaho -- Caldwell, July 9, 1926
(Haegele); Hot Springs, Owyhee County, July 4, 1951 (Barr);
Indiana -- Wabash County, July 5, 1935 (Trippel); Michigan
-- Lawton, July 12, 1924 (Gentner); Livingston County, July
12, 1923 (Hatch); Oakland County, June 22, 1921 (Hatch);
Nevada -- Carson City; Las Vegas; New Mexico -- Jemez Moun-
tains, June 4, 18, 21 (Woodgate); Oregon -- Bear Springs, May
18, 25, 1940 (Fender); July 18, 1938 (McClay); Butte Falls,
June 12, 1938 (McClay), June 11, 1939 (Gentner), June 16,
17, July 14, 1940, April 12, May 22, June 7, 29, July 4, 1941
(Gentner), April 27, June 15, 1941 (McClay); Clear Lake,
June 15, 1915 (Fender); Crescent Lake, Klamath County, August 10, 1935; Fremont National Forest, June 12, 1945 (Fender); Lake O' Woods, June 15, July 4, 1941 (Gentner); Metolius, June 14, 1945 (Fender); Moon Prairie Guard Station, Jackson County, June 15, 1941 (Gentner and McClay), July 4, 1941 (McClay); Prineville, July 22, 1939 (Gray and Schuh); Prospect, June 10, 1939 (Gentner); South Butte Forest Camp, Jackson County, June 15, 1941 (Gentner); Summit Prairie, August 3, 1935 (Schuh); July 23, 1939 (Gray and Schuh); South Dakota -- Madison, April 28, 1929 (Severin); Springfield, June 25, 1935 (Severin); Utah -- Utah Lake, June 19, 20, (Hubbard and Schwarz); West Virginia -- White Sulphur, August; Wisconsin -- Madison, May 21, 25, 1920 (Gentner); Canada -- Medicine Hat, Alberta, March 20, April 16, 1926 (Carr); a total of two hundred twenty-four specimens.

Horn (20, p. 264) gives the distribution as California (Owen's Valley) and western Nevada, also New Mexico (Ulke). Leng (29, p. 301) gives the distribution as Southern California, New Mexico, Indiana.

REMARKS. This species is most closely related to *subviridis* from which it may be distinguished by the color, more oblong oval shape, distinctly wrinkled vertex, more closely placed, prominent eyes, more transverse pronotum, more coarsely punctured elytra, and the regular sutural striae.
25. Chaetocnema obesula LeConte

Chaetocnema obesula LeConte, 1878 (26, p.418)

DESCRIPTION. Oval, moderately robust; black, slightly brassy, rather shining. Antennae piceous, two or three basal joints reddish brown. Head very finely, densely alutaceous; vertex impunctate. Pronotum about three-fourths wider than long; sides arcuately narrowed to the front; surface very finely, densely alutaceous, barely perceptibly punctate, the punctures relatively widely separated; basal marginal line distinct and entire, with a row of coarser punctures at each side. Elytra wider at base than pronotum; humeri rounded; umbones distinct; disc convex; surface shining, not alutaceous; striae distinctly impressed, punctures relatively coarse, deep, and closely placed; intervals slightly convex, wider than the striae. Body beneath piceous, moderately shining. Abdomen moderately punctate. Femora piceous; tibiae and tarsi dark reddish brown. Length 1.20 to 1.56 mm.; width 0.68 to 0.92 mm.

TYPE LOCALITY. Baldwin, Florida, June 1. Described from two specimens from Baldwin and Lake Ashby, Florida. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Specimens have been examined from Florida -- Baldwin, June 1; Edgewater, March 7, 1939 (Frost); Enterprise, June 21; Lake Ashby; Miami, August 23, 1933; Paradise Levee, February 24, 1919; a total of
fourteen specimens.

Horn (20, p.264) gives the distribution as Enterprise and Lake Ashby, Florida. Leng (29, p.301) gives the distribution as Florida. As far as is known, this species occurs only in Florida.

REMARKS. Aside from locality, this small species is distinguished by its dark appendages, its barely perceptibly punctate pronotum, and its robust, somewhat broadly oval form of the elytra, with very convex disc. This species and _gentneri_ are the two smallest North American species of _Chaetocnema_ known to the writer. The latter has the pronotum distinctly and rather closely punctate, the basal marginal line without coarser punctures, the elytra more narrowly oval, and the appendages lighter in color. Also closely related to _obesula_ is _ectypa_. This species is somewhat larger in size, has a distinct bronze luster, lighter colored appendages, punctures of pronotum more easily seen and more closely placed, form of elytra more oblong oval, with disc not as convex, and the distribution is western.

Horn (20, p.264) stated that the pronotum is not visibly punctate; however, it has extremely fine, well separated punctures. These can be seen under higher magnification. LeConte stated in his original description that the pronotum is obsoletely punctate.
26. *Chaetocnema ectypa* Horn

*Chaetocnema ectypa* Horn, 1889 (20, p.265)

**DESCRIPTION.** Oblong oval to oval; piceous, with distinct bronze or brassy luster; elytra shining; pronotum feebly so. Antennae rufotestaceous, apical four or five joints piceous. Head alutaceous; vertex impunctate, except for a few coarse punctures near each eye. Pronotum about one-half wider than long; sides feebly arcuate, little narrowed to the front; anterior angles rounded; surface distinctly alutaceous; punctures very fine, indistinct, moderately closely placed; basal marginal line distinct, with moderately coarse, closely placed punctures at each side. Elytra wider at base than pronotum; humeri broadly rounded; umbones distinct; outline in females oblong oval, in males more regularly oval; surface shining, not perceptibly alutaceous; striae impressed, punctures relatively coarse, round, deep, and moderately closely placed; intervals little wider than striae. Body beneath piceous. Abdomen rather finely punctate. Anterior and middle femora dark reddish brown, posterior femora piceous, bronzed; tibiae and tarsi rufotestaceous. Males, length 1.36 to 1.64 mm.; width 0.76 to 0.83 mm. Females, length 1.48 to 1.80 mm.; width 0.84 to 1.00 mm.

**TYPE LOCALITY.** Lectotype and one paratype, Arizona, three paratypes, California, in collection of the Academy of Natural Sciences, Philadelphia.
DISTRIBUTION. This species is known to occur in Arizona, California, Colorado, and New Mexico. Specimens have been examined from Arizona -- Douglas, August 24, 1926, April 19, 1933 (Brisley); Flagstaff, July 13, 1926, (Brisley); Globe (Duncan); Nogales, Santa Cruz County, September 5, October 3, 1906 (Nunenmacher); Phoenix; Verde Valley, May, 1921, June 2, 4, 10, 1926 (Brisley); Yuma, July 5, 1938 (Asquith); April 23, 1904; California -- Anaheim, December 11, 1908 (Marsh); Arboga, Yuba County, September 7, 1940 (McClay); Artesia, April 16, 1934 (McClay); Bard, June 10, 1915 (Urbahns); Bishop, July 21, 1921 (Muchmore); Brawley, October 1, 1934; Carlsbad, San Diego County, September 24, 1934; Castaic, Los Angeles County, September 25, 1934; Chico, July 28, 1923 (Essig); Chino, San Bernardino County, September 21, 1934; Clear Lake, April 22, 1938 (McClay); Coachella, October 1, 1934; Compton, March 1, 1934 (McClay); Cypress, April 3, 1934 (McClay); El Toro, October 23, 1931 (McClay); Elwood, Santa Barbara County, October 2, 1932; Fullerton, Orange County, August 7, September 7, 1930 (Bartholomew); Grass Valley, Nevada County, September 16, 1934 (Cartwright); Hueneme, March 1, 1931 (Barrett); Inyo County, May 1, 1934 (Nunenmacher); Kaweah, Tulare County (Hopping); Lakeport, April 22, 1938 (McClay); Los Angeles, December 1, 1934 (McClay); Monticello, July 22, 1930 (McClay); Pasadena, June 2, 1897, May 26, 1904; Playa del Ray, March 3, 1934 (McClay); Redondo, March, 1905;
San Juan Gap, Orange County, September 24, 1934; Santa Ana, April 15, 1934 (McClay); Seal Beach, Orange County, September 22, 1934; Sonoma County (Ricks); Stockton, September 15, 1929 (McClay); Williams, Colusa County, September 16, 1931; Colorado — Lonetree, June 1, 1934 (Rotger); Nevada — Alamo, August 1, 1939, May 15, 1941 (La Rivers); New Mexico — State College, August 25, 1943 (Eyer); a total of one hundred twelve specimens.

Horn (20, p. 265) gives the distribution as Los Angeles, California and Arizona. Leng (29, p. 301) gives the same distribution.

FOOD PLANTS. Corn, milo maize.

REMARKS. This species has been given the common name of the desert corn flea beetle (37, p. 130). It closely resembles _obesula_, which is known only from Florida; however, it is somewhat larger than that species, has light colored appendages, somewhat less convex pronotum, with straighter sides and more coarsely alutaceous surface, the punctures being more plainly visible and more closely placed. It also has a distinctly bronze or brassy luster, while _obesula_ is more truly shining black in appearance.

27. Chaetocnema _pulicaria_ Melsheimer

*Chaetocnema pulicaria* Melsheimer, 1847 (34, pp. 167, 168)

*Chaetocnema aeneola* LeConte, 1879 (28, p. 518)

DESCRIPTION. Narrowly oval, convex; surface shining,
with bronze or brassy luster. Antennae piceous, with three or four basal joints rufotestaceous. Eyes prominent, rather closely placed. Head alutaceous; vertex impunctate, except for a group of punctures near each eye. Pronotum about one-half wider than long; sides feebly arcuate, little narrowed in front; basal marginal line distinct, with a row of moderately coarse, closely placed punctures on either side; surface distinctly alutaceous, subopaque; punctures fine, feebly impressed and well separated. Elytra wider at base than pronotum; humeri distinctly rounded; umbones moderately prominent; surface shining, scarcely visibly alutaceous; striae faintly impressed, punctures relatively coarse and closely placed; intervals convex, very little wider than striae, smooth, with indistinct fine punctures. Body beneath black, moderately shining, faintly bronzed. Abdomen sparsely punctate. Anterior and middle femora dark reddish brown, posterior femora piceous; tibiae and tarsi rufotestaceous, tibiae often darker toward apex. Males, length 1.44 to 1.72 mm.; width 0.76 to 0.92 mm. Females, length 1.64 to 1.88 mm.; width 0.88 to 0.96 mm.

TYPE LOCALITY. Pennsylvania. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

FOOD PLANTS. Taken on corn and wheat.

DISTRIBUTION. This species is widely distributed, mostly east of the Rocky Mountains. Specimens have been examined from Alabama — Huntsville, June 17 (Musgrave);
Colorado; Illinois -- Hillview, April 6, 1926 (McClay); Pittsfield, July 15, 17, August 14, 1946 (McClay), August 20, 22, 1947 (Caldwell); Urbana, February 24, 1929 (Stewart); Indiana -- Daviess County, August 8, 1938 (Reeves); Iowa -- Muscatine County, June 22, 1937 (Berger); Kansas -- East Kansas, April (Popenoe); Ellsworth, April 2 (Painter); Grove County, April 20 (Painter); Manhattan, October 21, 1922 (Smith), September 1, 1925 (Smith), August 1, 19, 27, 1930 (Smith), April 14, May 1, 2, 1930 (Painter); Oketa, October 24, 27, 1928 (Whitney); Onaga, August 10, 1920, April 5, 1923 (Crevecoeur); Riley County, May 9, September 12 (Norton), March 20, May 9, June 10, November 6 (Marlatt); Louisiana; Maryland -- Baltimore, June 7 (Blaisdell); Sparrow Point, July 4, 1932 (Green); Michigan -- East Lansing, October 16, 1922, September 17, 1923 (Gentner); Mississippi -- Agricultural College; Missouri -- Florence, May 13, 1939 (Enns); Sedalia, June 10, 1939 (Enns); New Jersey -- Cliffwood, January 19, 1926 (Schott); New Mexico -- Las Vegas, December 8 (Barber and Schwarz); North Carolina -- Cataloochee Divide, June 9-14, 1940 (Frost); Forney Ridge, Great Smoky Mountains, June 18, 1940 (Alexander); Graybeard Mountain, June 9; Mount Mitchell, June 6, 1940 (Alexander), Raleigh, March 20, 1905 (Sherman); Ohio -- Pickaway County, May 23, 1928; Oklahoma -- Broken Bow, June 29, 1937 (Standish-Kaiser); Idabel, June 8, 1931 (Deonier); Pauls Valley, July 24, 1937 (Standish-Kaiser);
Stillwater, August 22, 1935 (Stankovich); Pennsylvania -- Easton, August 17, 1932 (Green); Effort, August 6, 1930 (Green); Jeanette, June 20 (Klages); Wind Gap, August 1, 1930, (Green); South Carolina -- Calhoun, July 30, 1905 (Titus); South Dakota -- Fort Thompson, September 18, 1944 (Severin); Tennessee -- Elmwood (Corse); Smoky Mountains, June 6, 1939 (Alexander); Texas -- Brownsville, January 9, 17, 18, 19, 1923 (Bottimer); Dallas, October 16, 1927 (Bottimer); Eastland, April 25, 1915; Flatonia, July 30 (Green); Kingsville, January 27, 29, 1923 (Bottimer); Robstown, July 3, 1922 (Bottimer); Victoria, June 25, 1907, July 25, 1912 (Mitchell); Virginia -- Norfolk, April 28, 1925 (Lugenbill); Vienna, Fairfax County, June 11, 1926, April 15, May 2, September 29, 1927 (Bottimer); Washington, D. C., July 21, 1906 (Roberts), October 14, 1906 (McAtee); West Virginia -- Fairmont, August 9, 1928 (Musgrave); a total of two hundred and six specimens.


REMARKS. This species has been given the common name of corn flea beetle (37, p.130). It may be separated from related species by its narrowly oval form, prominent, rather closely placed eyes, and its rather straight sided, subopaque pronotum, which is finely, though distinctly,
punctate.

Horn (20, p.266) stated that *aeneola* LeConte does not differ specifically from *pulicaria*, and LeConte's description of *aeneola* agrees very well with that of *pulicaria*; therefore it should be placed as a synonym of *pulicaria*.

**28. Chaetocnema subconvexa** new species

The detailed description of this species is given in a manuscript, which is being prepared for publication in the near future.

**29. Chaetocnema crenulata** Crotch

*Chaetocnema crenulata* Crotch, 1873 (11, p.74+)

*Chaetocnema crenulata* Schwarz, 1878 (40, p.368)

*Chaetocnemis crenulata* Crotch (Schwarz) (40, p.460)

*Chaetocnema schwarzi* Cuvier, 1885 (12, p.55)

**DESCRIPTION.** Very broadly oval, convex, robust; sides of pronotum and of elytra almost continuous; piceous, faintly bronzed, shining. Antennae rufotestaceous, with the apical joint darker. Eyes widely separated. Head very finely alutaceous; vertex impunctate. Pronotum about twice as wide as long, distinctly narrowed in front; sides feebly arcuate; basal marginal line distinct, with a row of closely placed fine punctures at each side; disc distinctly alutaceous; punctures coarse, deep, elongate, not closely, rather irregularly placed. Elytra not wider than pronotum at base; humeri scarcely evident, umbones not
prominent; surface shining; striae scarcely impressed, punctures coarse, deep, moderately closely placed; intervals wider than striae, feeably convex, with indistinct fine punctures. Body beneath piceous, faintly bronzed.

Abdomen sparsely punctate. Anterior and middle femora dark reddish brown, posterior femora piceous; tibiae and tarsi rufotestaceous. Length 1.50 to 2.08 mm.; width 0.87 to 1.28 mm.

TYPE LOCALITY. North Carolina. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. This species is known only from Florida, Georgia, and North Carolina. Specimens have been examined from Florida — Gainsville, June, 1929 (Musgrave); Sumpter, Georgia — Tifton; North Carolina; a total of eleven specimens.

Horn (20, p.266) gives the distribution as North Carolina, Georgia, Florida. Leng (29, p.301) gives the distribution as North Carolina, Florida.

REMARKS. This species is very distinct in its broadly oval, robust form, broad head, with widely separated, inconspicuous eyes, and coarse, rather elongate, unequally spaced punctures of the pronotum.

Schwarz (40, p.368) among his new species gave a detailed description of a "Chaetocnema cremulata, n. sp." At the end of the description he gave the reference "Crotch, Proc. Acad. Nat. Sc. Phila., 1873, 74". This
description accurately describes crenulata Crotch. At the end of this article, under the "List of Species" (40, p.460), Schwarz lists the species as "Chaetocnemia crenulata Crotch (vide p.368)", referring back to his description. It is very evident that he was familiar with the crenulata of Crotch, and that his designation of it as a new species was an error, since it was rectified in his list of species at the end of the article. He apparently just wanted to write up a more complete description of this insect than did Crotch. It is interesting to note that in his article Schwarz used the correct spelling "Chaetocnema" while in his list he uses the spelling "Chaetocnemis". The crenulata of Schwarz is without doubt the same as crenulata Crotch.

In 1885 (12, p.55) Duvivier published the new name schwarzi for crenulata Schwarz, because crenulata had already been used by Crotch. This means then that both crenulata Schwarz and schwarzi Duvivier must be considered synonyms of crenulata Crotch.

30. Chaetocnema magnipunctata Gentner

Chaetocnema magnipunctata Gentner, 1928 (15, p.64)

DESCRIPTION. Broadly oval, not very convex for the genus; brassy-bronze, with slight greenish tinge, shining. Antennae piceous, with basal four joints more or less rufo-testaceous. Head densely alutaceous, dull; vertex
impunctate, except for a few punctures near each eye. Pronotum about three-fourths wider than long, somewhat narrowed to the front; sides regularly arcuate; surface very faintly alutaceous, shining, with conspicuous, large, round, deep punctures, irregularly placed, many in short transverse and oblique rows, intervening surface with extremely fine punctures; basal marginal line distinct, defined on each side by a row of somewhat smaller, closely placed punctures. Elytra a little wider at base than pronotum, broadly oval, broadly rounded to apex; humeri obtuse; umbones distinct; punctures about as coarse as those of the pronotum, well separated, sutural striae noticeably impressed, others not so much so; intervals scarcely alutaceous, about as wide as the striae, with fine punctures. Abdomen beneath shining, finely alutaceous, finely, very sparsely punctate. Femora piceous; tibiae and tarsi rather dark reddish brown.

**TYPE LOCALITY.** Type female, Needles, California, August 3, 1919 (Rehn and Hebard), in the collection of the Academy of Natural Sciences, Philadelphia. There are two paratypes, same data, one in the collection of the writer, the other in the Charles Schaeffer collection, which is now in the collection of the United States National Museum.

**DISTRIBUTION.** Only three specimens are known to the writer, all from Needles, California. Leng and Mutschler (31, p. 146) give the distribution as southern California.
REMARKS. This species is readily distinguished by its most unusually punctate pronotum. The punctures are round, coarse, and deep, and occur in short transverse and oblique rows, quite often widely separated. This punctuation is outstandingly different from that of any other known North American species of this genus. The form is rather broadly oval and subdepressed, and the appendages are dark. It is placed near *crenulata* in the key, but is readily distinguished from that species by its much less robust form, brassy-bronze coloration, round, peculiarly placed pronotal punctures, and darker antennae, tibiae, and tarsi. In *crenulata* the pronotal punctures are elongate, instead of round.

31. *Chaetocnema costata* Fall

*Chaetocnema costata* Fall, 1907 (13, pp.252,253)

DESCRIPTION. Moderately broadly oval; piceous, with distinct green-bronze luster. Antennae rufotestaceous at base (apical joints missing). Head alutaceous, numerously punctate. Pronotum scarcely one-third wider than long, widest behind the middle; sides arcuate and a little narrower in front; anterior angles narrowly, obliquely truncate, with slight post-apical angulations; surface not alutaceous; punctuation rather fine, a little coarser near base and sides, punctures separated by from one to two times their own diameters. Elytra not quite one-fourth longer
than wide, basal width subequal to that of pronotum; sides divergent and nearly straight to basal two-fifths, where they are broadly, but distinctly subangulate, thence broadly arcuate and slightly convergent, apex obtusely rounded; surface alutaceous; punctures a little confused in the scutellar region; intervals 3, 5, 7, 9 rather strongly costiform. Beneath closely, rather strongly punctate. Femora piceous; tibiae and tarsi rufotestaceous. Length 2.3 mm.; width 1.4 mm.

**TYPE LOCALITY.** Cloudcroft, New Mexico (Viereck). Described from one specimen. The type is in the collection of the Academy of Natural Sciences, Philadelphia.

**DISTRIBUTION.** Leng (29, p.301) gives the distribution as New Mexico. To the writer's knowledge the type specimen is the only known specimen of this species.

**REMARKS.** This species differs remarkably from all other known species of North American *Chaetocnema* with obliquely truncate anterior angles of the pronotum by its punctate vertex, subangulate sides of the elytra, and costiform intervals.

32. *Chaetocnema confinis* Crotch

*Chaetocnema confinis* Crotch, 1873 (11, p.75)

*Chaetocnema flavicornis* LeConte, 1878 (26, p.418)

**DESCRIPTION.** Rather broadly oval, robust; piceous, with more or less brassy or bronze luster. Antennae
rufotestaceous, last joint sometimes slightly darker. Head finely alutaceous; vertex impunctate, except for a few coarse punctures near each eye. Pronotum nearly twice as wide as long, distinctly narrowed in front; anterior angles obliquely truncate, with distinct post-apical angulation, behind which sides are feebly arcuate; without distinct basal marginal line; surface usually distinctly alutaceous; punctures moderate in size, closely placed, not deeply impressed. Elytra scarcely wider at base than pronotum; humeri broadly rounded; umbones moderate; surface shining, very faintly alutaceous; striae moderately impressed on disc, more so at sides, punctures moderately coarse, deep, moderately close in striae; intervals moderately convex, wider than striae on disc, finely punctate. Body beneath piceous, shining. Abdomen sparsely, indistinctly punctate. Tibiae and tarsi rufotestaceous; anterior and middle femora slightly darker, posterior femora piceous. Males, length 1.40 to 1.72 mm.; width 0.80 to 0.96 mm. Females, length 1.60 to 1.88 mm.; width 0.88 to 1.04 mm.

TYPE LOCALITY. North and South Carolina. The type is in the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. This species is widely distributed throughout the United States and Canada. Specimens have been examined from Alabama -- Jackson, April 10, 1910 (Pierce); Arkansas -- Elkins, May 23, 1899; Hope, June 5, 1923 (Knobel); California -- Calistoga, July 1, 1931
(McClay); Castle Crag, July 18, 1940 (Gentner); Contra Costa County, October 28, 1938; Davis, 1931; Forrestville, May 17, 20, 1937 (McClay); Glen Ellen, June 19, 1938 (McClay); Lakeport, April 22, 1938 (McClay); Los Angeles, December 1, 1934 (McClay); Mokelumne Hill, Calaveras County (Blaisdell); Sacramento, March 15, 1928 (Wakeland), October 13, 1938 (McClay); San Diego (Blaisdell); San Mateo County (Baker); Santa Clara County (Baker); Santa Paula, June 2, 1941; Saticoy, July 20, 1926; Colorado -- Fort Collins, July 27, 1922, July 3, 1923, June 21, 24, 1924; Trujillos, May 14, 1934 (Rotger); Connecticut -- Cornwall, July 5, (Frost); Florida -- Macclenny, May 11, 1918; St. Augustine; Georgia -- St. Simons Island, July 19, 1931 (Frost); Illinois -- Champaign, September 13, 1927 (McClay); Chicago, May 2; Kakokia, St. Charles County, September 30, 1919; Pittsfield, August 22, 1947 (Caldwell); Urbana, February 24, 1929 (Stewart); Indiana -- Crawford County, June 11, 1916; Marion County, May 23, 1897; Steuben County, June 19, 1908; Iowa -- Ames, May 7, 1930 (Guthrie), April 26, May 5, November 5, 1948 (Blickenstaff), August 6, 1952 (Fronk); Henry County, May 7, 1938 (Boshart); Keokuk County, July 21, 1937 (Jaques); Madrid, May 5, 1940 (Lindsay); Maysville, September 1, 1941 (Lindsay); Kansas -- Manhattan (Hayes); Onaga, July 9, 1922 (Crevecoeur); Riley County, April 20, 25, 28, 29, 30 (Marlatt), May 24, June 17 (Popenoe); Salina, (Knauss); Topeka (Popenoe); Williams County, April 23, 1896;
Louisiana -- Leesville, August 4, 1947 (Fitch); Tallulah, July 7, August 6, 1930 (Glick); November 22, 1933 (Folsom);
Maryland -- Baltimore, June 19, 1909 (Blaisdell); Plummer's Island, June 4, 1905, June 17, 1906 (McAtee);
Massachusetts -- Chicopee, June 5, 1892, May 23, 1896; Marion (Bowditch); Southboro, July 4, 1921, May 21, 1922, July 13, 1938 (Frost); Springfield, July 24, 1901; West Springfield, May 12, 1900; Michigan -- East Lansing, July 12, October 24, 1921, May 5, July 24, 25, 1922 (Gentner); Fennville, June 7, 1928 (Gentner); Monroe, June 8, 1921 (Gentner);
New Baltimore, McComb County, June 17, 1944 (Malkin); Washtenaw County, August 25, 1921 (Hatch); Mississippi -- Agricultural College, October 22, 1894 (Wood); Missouri -- Columbia, May 4, 1940 (Enns); Florence, May 13, 1939 (Enns); Howard County, May 12, 1939 (Enns); Lamire, May 12, 1939 (Enns); St. Louis, May (Pock); Nebraska -- Lincoln; West Point, May, 1888; New Jersey -- Avenel, May 16, 1931 (Siepman); Barnegat, August 7, 1932 (Green); Barnegat Bay, August 4, 1928, August 7, 1932 (Green); Camden County, December (Kemp); Chester, July 4; Gloucester (Boerner);
Hillsdale, June 14, 1931 (Quirsfeld); Island Beach, Barnegat Bay, May 7, 1931 (Siepman); Morristown, August 18, 1940 (Malkin); Oradell, May 19, 1918; Phillipsburg, August 27, 1917 (Green); New York -- Combs, July 15, 1948 (Watkins); Great Kills, June 6, 1940 (Malkin); Onandago County, May 23, 1923 (Hatch); North Carolina -- Black Mountains, June
22; Raleigh, June, 1901 (Sherman, Jr.); Southern Pines, April 22, 1910 (Manee); Oregon -- Blooming, April 28, 1938; Cornelius, May 6, 1938 (Gray and Schuh); Corvallis (Moznette), April 16, 1896 (Schwarz); Eagle Point, April 19, 1936 (Gentner), October 7, 1939 (McClay); Forest Grove, May 8, June 1, 1938 (Gray and Schuh); Goble, April 8, 1936 (Schuh); Independence, August, 1934 (Larsen); McMinnville, October 27, 1927; May 8, 1939, May 6, 1940, July 20, 1941 (Fender); Medford, April 6, 1941 (Gentner); Pea Vine Ridge, June 4, September 24, 1945 (Fender); Talent, October 29, 1915, April 1, 1939, September 29, 1945 (Gentner); Pennsylvania -- Easton, September 9, 1915, July 15, 1927, August 28, 1932, June 14, August 28, 1938 (Green); Greentown, August 17, 1929 (Quirsfeld); Wind Gap, May 17, 1932 (Green); South Dakota -- Canton, June 16, 1924 (Gilbertson); Colton, August 1, 1923 (Severin); Nora, May 31, 1939 (Brunn); Yankton, August 8, 1924 (Gilbertson); Tennessee -- Elmwood (Corse); Texas -- Brownsville, January 3,9,18, July 22; Columbia, December 13; Dallas, April 17, 1907 (Schwarz and Pratt), April 24, 1907 (Yothers), May 12, 1907 (Schwarz), May 1, 1909 (Pierce); Liberty, March 23, April 5,14,25, 1923 (Bottimer); San Antonio, December 22, 1879; Smith Point, September 14, 1922 (Bottimer); Utah; Virginia -- Great Falls, April 29, 1906 (Knab); Vienna, Fairfax County, June 11, 1926 (Bottimer); Washington -- Toppenish, April 28, 1938 (Gray); West Virginia -- East Panhandle, June 15,
1928 (Musgrave); White Sulphur, July; Wisconsin -- Beloit, October 8, 1928 (Davidson); Madison, August 1, 15, 1914; May 12, June 2, 1915; May 17, July 9, 16, August 10, 1917, May 25, 1918, May 23, August 12, October 31, November 5, 1919, May 18, 19, 21, 25, 1920 (Gentner); Monroe, May 31, 1919 (Gentner); Canada -- Alberta, Edmonton, July 24, August 8, 1917, July 9, 1918, June 3, 1919, August 24, 29, 1922 (Carr); Manitoba, Aweme, June 2, 1915 (Cridde); Ontario, Point Pelee, May 28, 1914 (Malkin); Prince Edward County, August 11, 1929 (Brimley); a total of five hundred seventeen specimens.

Horn (20, p.266) gives the distribution as from Pennsylvania to Florida, Michigan, Colorado, Dakota, and California (Mendocino). Leng (29, p.301) gives the distribution as Connecticut to Florida, Indiana and California. Blackwelder (6, p.44) added Oregon to the distribution.

FOOD PLANTS. Convolvulus arvensis, Convolvulus repens, Convolvulus sepium, Creeping Jenny, sweet potato.

REMARKS. This species is commonly called the sweet potato flea beetle (37, p.130). It is distinguished from closely related species by the lack of a distinct basal marginal line on the pronotum, the distinct bronze or brassy luster on the pronotum, and its broadly oval, robust form. It varies somewhat in degree of alutaceousness and distinctness of punctuation of the pronotum, and in the width of the elytra.
Horn (20, p.266) stated: "After an examination of flavicornis I can find no reason to separate it from the present species". A study of LeConte's description of flavicornis (26, p.418) shows no specific differences, therefore it must be considered a synonym of confinis.

33. Chaetocnema elongatula Crotch

Chaetocnema elongatula Crotch, 1873 (11, p.75)

DESCRIPTION. Elongate oval, narrow, pointed, rather subdepressed; black, shining. Antennae rufotestaceous. Head alutaceous; vertex impunctate. Pronotum alutaceous, bluish, transverse, somewhat narrower in front; anterior angles distinctly obliquely truncate, with post-apical angulation; sides feebly arcuate; surface rather finely, moderately closely punctate. Elytra little wider at base than pronotum; humeri indistinct; umbones not prominent; sides subparallel; surface blackish, not noticeably alutaceous; punctate-striate, the scutellar striae reaching the middle of the elytra. Body beneath piceous. Legs rufotestaceous, except posterior femora, which are piceous. Length 1.50 mm.

TYPE LOCALITY. Described from one specimen from Colorado. The type is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. The type from Colorado is the only specimen known to the writer. Horn (20, p.267) gives the
distribution as Kansas, Colorado, and Dakota; however, the specimens in the Horn collection under *elongatula* are different from the type. They probably constitute a new species, but a study of a larger series is necessary, before this can be definitely determined. Leng (29, p.301) gives the distribution as Kansas and Colorado.

**REMARKS.** This species may be readily recognized among those species with obliquely truncate anterior angles of the pronotum, by its elongate oval, subdepressed form.

34. *Chaetocnema dispar* Horn

*Chaetocnema dispar* Horn, 1889 (20, p.267)

**DESCRIPTION.** Oval, slightly oblong; surface piceous, moderately shining, with scarcely a trace of bronze luster. Antennae entirely rufotestaceous. Head finely alutaceous; vertex impunctate. Pronotum nearly twice as wide as long, distinctly narrowed in front; anterior angles obliquely truncate, with post-apical angulation; the sides arcuate to base; basal marginal line fine, but distinct; surface very distinctly alutaceous; the punctures moderately coarse, very closely placed, but not deeply impressed. Elytra not wider at base than pronotum, the margin nearly continuous; umbones feeble; disc deeply striate, striae relatively coarsely, crenately punctured; intervals convex, narrower than the striae, interstrial punctures indistinct. Body beneath piceous black, shining. Anterior and middle femora brownish testaceous, posterior femora piceous, paler at tip;
tibiae and tarsi all rufotestaceous. Length 1.50 mm.

TYPE LOCALITY. One lectotype and one paratype, Georgia, are in the collection of the Academy of Natural Sciences, Philadelphia.

DISTRIBUTION. Horn (20, p.267) and Leng (29, p.301) give the distribution as northern Georgia. The lectotype and paratype are the only two authentic specimens known to the writer. A series of three specimens from Fort Brown, Brownsville, Texas, July 22, borrowed for study from the collection of the United States National Museum had been determined by Schaeffer as dispar. The writer feels that these are not dispar, but undoubtedly confinis.

REMARKS. This species somewhat resembles confinis, but may be distinguished from that species by the black pronotum, which is more coarsely punctate, with a distinct basal marginal line, and by its more narrowly oval form, and its more coarsely punctate, distinctly impressed elytral striae.

35. Chaetocnema quadricollis Schwarz

Chaetocnema quadricollis Schwarz, 1878 (40, p.368)

DESCRIPTION. Ovate, not very convex; black, shining, with brassy luster. Antennae rufotestaceous, with apical segment sometimes slightly darker. Head finely alutaceous, somewhat shining; vertex impunctate, except for a few punctures near each eye; eyes prominent, not widely separated.
Pronotum about one-half wider than long, transversely quadrate, slightly wider in front than at base; front angles very obliquely truncate, with very slight post-apical angulation; sides behind this almost straight; basal marginal line distinct, entire; disc more or less alutaceous, not very convex; sparsely, moderately finely punctate. Elytra distinctly wider at base than pronotum; humeri broadly rounded; umbones moderately prominent; striae not deeply impressed, punctures moderately coarse, closely placed; intervals subconvex, very little wider than the striae, with fine punctures; surface not alutaceous, shining. Body beneath piceous, somewhat shining. Legs usually entirely pale rufotestaceous, the posterior femora sometimes darker.

Males, length 1.50 to 2.00 mm.; width 0.77 to 1.08 mm. Females, length 1.38 to 2.12 mm.; width 1.04 to 1.20 mm.

TYPE LOCALITY. Described from many specimens from Enterprise and New Smyrna, Florida, in May and June. The type is in the collection of the United States National Museum.

DISTRIBUTION. Specimens have been examined from

Arkansas -- (Knobel); Florida -- Enterprise, May 16, 28, June 16; H. Canal, March 24, 1922 (Blatchley); Maryland -- Baltimore, June 14, 20, 1909 (Blaisdell); Michigan -- East Lansing, January 4, 1923 (Gentner); New Jersey -- Rutherford; Tuckahoe, July 1 (Green); Texas -- Brownsville, June 8, 1941 (Barr); Corpus Christi, July 7, 1941 (Barr);
Wallisville, August 28, 1922 (Bottimer); Virginia -- Fairfax County, June 28, 1925 (Schott); a total of thirty-eight specimens.

Horn (20, p.268) gives the distribution as Florida (Enterprise, New Smyrna, Biscayne Bay). Leng (29, p.301) gives the distribution as Florida and New Jersey.

FOOD PLANTS. Collected on Kosteleskya sp. and on Hibiscus sp.

REMARKS. This species is easily recognized by the transversely quadrate pronotum, wider in front than at base, with obliquely truncate anterior angles, and with entire basal marginal line, and by the pale antennae and legs. The elytra are noticeably broader than the pronotum and broadly rounded at the tips.

36. Chaetocnema decipiens LeConte

Chaetocnema decipiens LeConte, 1878 (26, p.418)

DESCRIPTION. Rather narrowly oval, not very convex; slightly bronzed or brassy, shining. Antennae rufotestaceous, apical few joints darker. Head quite shining, scarcely alutaceous; vertex impunctate, except for a few punctures near each eye. Pronotum about one-half wider than long, transversely quadrate, not wider in front than at base; with front angles obliquely truncate and slight post-apical angulation, behind which the sides are slightly arcuate; basal marginal line feebly distinct near the sides; surface
rather shining, only slightly alutaceous; punctures rather fine, distinct, and widely separated. Elytra a little wider at base than pronotum; humeri broadly rounded, umbones indistinct; sides narrowly, very regularly arcuate, widest at middle, somewhat pointed at apex; striae moderately impressed, punctures relatively coarse, closely placed, and deep; intervals slightly convex, about as wide as the striae. Body beneath black, shining. Femora piceous; tibiae and tarsi rufotestaceous. Males, length 1.52 to 1.60 mm.; width 0.80 to 0.84 mm. Females, length 1.52 to 1.76 mm.; width 0.84 to 0.96 mm.

TYPE LOCALITY. Kansas. Described from one specimen, which is in the collection of the Museum of Comparative Zoology, Cambridge.

DISTRIBUTION. Horn (20, p.268) and Leng (29, p.301) give the distribution as Kansas. In the Horn collection are specimens from Texas, which agree very well with the type. Specimens have been examined from Kansas; and Texas -- Brownsville, October 6, 1904; January 7,16, 1923 (Bottimer), January 17, 1923 (Barber); Victoria, June 26, 1907 (Mitchell); a total of twenty-three specimens.

REMARKS. This species resembles quadricollis, but is more narrowly oval, with the pronotum not wider in front, and sides slightly arcuate. The elytra are not conspicuously wider at base than the pronotum, and the antennae and legs are darker.
BIBLIOGRAPHY


24. LeConte, John J. Entomological report on route near 47th and 49th parallels. Reports of explorations and surveys to ascertain the most practicable and economical route for a railroad from the Mississippi river to the Pacific ocean 12 (book 2, part 3, no. 1):1-72. 1857.


### INDEX TO SPECIES

<table>
<thead>
<tr>
<th>Species</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>aemula Horn</td>
<td>47</td>
</tr>
<tr>
<td>alutacea Crotch</td>
<td>60</td>
</tr>
<tr>
<td>bicolor Gentner</td>
<td>56</td>
</tr>
<tr>
<td>blatchleyi Csiki</td>
<td>62</td>
</tr>
<tr>
<td>bottimeri new species</td>
<td>58</td>
</tr>
<tr>
<td>brunnescens Horn</td>
<td>32</td>
</tr>
<tr>
<td>confinis Crotch</td>
<td>83</td>
</tr>
<tr>
<td>costata Fall</td>
<td>82</td>
</tr>
<tr>
<td>crenulata Crotch</td>
<td>78</td>
</tr>
<tr>
<td>cribrata LeConte</td>
<td>21</td>
</tr>
<tr>
<td>cribrifrons LeConte</td>
<td>39</td>
</tr>
<tr>
<td>decipiens LeConte</td>
<td>93</td>
</tr>
<tr>
<td>denticulata (Illiger)</td>
<td>34</td>
</tr>
<tr>
<td>dispers Horn</td>
<td>90</td>
</tr>
<tr>
<td>ectypa Horn</td>
<td>72</td>
</tr>
<tr>
<td>elongatula Crotch</td>
<td>89</td>
</tr>
<tr>
<td>floridana Blatchley</td>
<td>42</td>
</tr>
<tr>
<td>frosti new species</td>
<td>43</td>
</tr>
<tr>
<td>gentneri Csiki</td>
<td>58</td>
</tr>
<tr>
<td>irregularis LeConte</td>
<td>24</td>
</tr>
<tr>
<td>perturbata Horn</td>
<td>19</td>
</tr>
<tr>
<td>pinguis LeConte</td>
<td>43</td>
</tr>
<tr>
<td>protensa LeConte</td>
<td>28</td>
</tr>
<tr>
<td>protensa splendida Gentner</td>
<td>31</td>
</tr>
</tbody>
</table>
pulicaria Melsheimer 74
quadricollis Schwarz 91
maclayi new species 23
magnatarsa new species 28
magnipunctata Gentner 80
minuta Melsheimer 51
obesula LeConte 70
opacula LeConte 49
opulentis Horn 67
splendida Gentner, protensa 31
subconvexa new species 78
subcylindrica LeConte 25
subviridis LeConte 63
texana Crotch 45