LYGAEIDAE OF KANSAS

BY

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LYGAEIDAE OF KANSAS

Introduction

The primary purpose of this paper is to present a study of the Lygaeidae of the State in which special search has been made for structural characters not hitherto employed.

Dr. H. B. Hungerford has been using the male genitalia as a character in the classification of aquatic hemiptera for several years, and suggested trying it for Lygaeidae.

The material necessary for these studies was obtained from the collection of the University of Kansas and contributions made by Professor H. G. Barber.

The writer wishes to express his appreciation to Professor H. G. Barber for the donation and determination of material, and to Dr. H. B. Hungerford, under whose direction the work was done, for his help and advice. To Dr. P. A. Readio the writer wishes to express his appreciation for his kind help, suggestions and criticisms. Many thanks are due Miss Kathleen Dearing, Mr. Robert Guntert and others for their aid and advice.
FAMILY LYGAEIDAE

Barber's Lygaeidae, in the Hemiptera of Connecticut, forms a reliable foundation for this paper. Major diagnostic characters used for the subfamilies and genera are the same as those used by Barber. These are: the position of the spiracles, dorsal and ventral, the character of the suture between the second and third ventral abdominal segments. This suture is straight in most of the subfamilies and reaches the lateral margin of the abdomen but in the largest subfamily Rhypoxochrominae it is outwardly curved forward and does not reach the margin of the body, except in the genus Plinthicus.

Other characters should be mentioned. The homelytra consist of three parts: the clavus, a narrow strip along the sides of the scutellum, the corium or remainder of coriaceous part of homelytra and the terminal membrane. The line formed by the meeting of the two clavi behind the apex of the scutellum is called the commisure and its length is distinctive. The punctuation or lack of punctuation is also distinctive. The plates or elevated ridges on either side of the base of the rostrum are reduced or sometimes extended to the base of the head. The fore femora may be more or less enlarged and often have spines or teeth beneath. The antenniferous tubercles are the triangular shaped lateral processes forming the sides of the head, upon which are
mounted the four-segmented antennae. The distance between the apex of this tubercle and the anterior margin of the eye, relative to the post-ocular space or the space back of the eye is often distinctive.

In his tribal subdivisions, Barber uses such characters as: the nature of the lateral margin of the pronotum, whether keeled, expanded or plain; the nature of the setae or bristles on the hind tibia; coloration, particularly of the pronotum and scutellum; the armature of the fore femora; the relative length of the segments of the hind tarsi; the presence or absence of a constricted ring-like collar anteriorly on the pronotum. (See Plate 1.)

The same characters are used for specific classification, but in addition the writer has used the male genitalia. The genital characters of several specimens of the same species were examined and found to be the same. Also forty-five different species were examined and the genital characters found to be distinct in every case.

The Male Genitalia

I shall not attempt to describe the genitalia but shall point out similar characters of different species in a genus.

In Lygaeus, there is a marked similarity in all species I have compared. All are about the same size. The claspers extend anteriorly, cross each other, and have a basal process that extends posteriorly. The lobes of the genitalia are very similar. (See Plate 2.)

In Nysius, the genitalia capsules are of about the same shape and size. The claspers of N. erioce (Schilling) and N. cali-
Prognatha Stal are very much alike, from the base first extending posteriorly to almost the end of the capsule and then turning anteriorly. The claspers are much curved. But *Nysius ericse minitius* Uhler is entirely different and probably should be another species instead of a variety. (See Plate 3.)

Gymus: The genitalia of the two species *G. angustatus* Stal and *G. luridus* Stal are about the same size; the claspers are nearly straight, and the lobes of the capsule are similar. (See Plate 3.)

Geocoris: The genitalia of the three species, *G. munitipes* (Say), *G. uliginosis* (Say) and *G. decoratus* Uhler are much alike. The claspers extend anteriorly and have a lobe at the base. The lobes of the genitalia capsules are very much alike. (See Plate 4.)

Pterygus: The genitalia of the two species *P. abbreviata* (Uhler) and *P. annuliorus* Stal are very much alike, but *P. abbreviata* (Uhler) is easily distinguished from *P. annuliorus* Stal by small dots scattered over the capsule, which the latter does not have. (See Plate 4.)

In Ptochismera and Ligyrocoris, there are only two species of each in Kansas. Their lobes are very similar, but their claspers are different. (See Plate 5.)

Van Duzee, in his recent catalogue, lists 187 species for North America, north of Mexico; 46 of which are found in Kansas. Most of the species range from 5-8 mm. in length. Oncoraltus
fasciatus (Dallas) being the largest, fully 15 mm., and Antilocorisa pallidus (Uhler) the smallest, only 2 mm. in length.

General characteristics; Antennae have four segments, and are inserted on or below the lateral margins of the head. Ocelli very seldom absent. Rostrum of four segments. Hemelytra generally coriaceous, consisting of clavus, corium and membrane; clavus with rare exceptions, forming a commissure; membrane with not more than five simple veins. Coxa trochapodopodus. Tarsi three-segmented; claws provided with arolia. Nymphs with two or three abdominal odoriferous orifices.

This family is divided into seven subfamilies, six of which are represented in Kansas.

Key to Subfamilies

1. All sutures between the ventral segments of the abdomen straight and reaching lateral margins on each side. Head commonly without setae near eyes. Fore femora most commonly unarmed ......................... 2.

Suture between the third and fourth ventral segments of the abdomen curved anteriorly and not reaching lateral margins on each side (except Flinthysis). Head most commonly provided with one or more setae near the eyes. Fore femora usually swollen and most commonly armed with teeth ..................Rhysporochrominae. (See page 29)

2. All abdominal spiracles situated dorsally. Entire moster-
ior margin of pronotum, or at least the margin before
the scutellum, turned down convexly. Fore femora not much swollen and rarely armed beneath with teeth or spines ................................................3

All abdominal spiracles not situated dorsally, at least those of them placed on the venter. Posterior margin of pronotum, at least before scutellum, commonly not turned down convexly. Fore femora more or less swollen, armed or unarmed ........................................4

3. Posterior margin of pronotum between scutellum and lateral angles more or less distinctly depressed or impressed. Hemelytra, usually the head, pronotum and scutellum impunctate. Two interior veins of membrane commonly joined together near base by a transverse vein ......

..........................................................Lygaeinae
(See page 9)

Posterior margin of pronotum between the scutellum and lateral angles not distinctly depressed or impressed. Hemelytra, head, pronotum and scutellum distinctly punctate. Two interior veins of membrane not joined together near base by a cross vein ..........Cyminoae
(See page 19)

4. All abdominal spiracles not situated ventrally, at most only three apical ones so placed. Anterior femora moderately incrassate and commonly unarmed ..........5

All abdominal spiracles situated ventrally. Anterior femora more or less swollen and armed with one or
5. Head always narrower than posterior margin of pronotum; tylus not sulcate. Hemelytra not convex and almost if not quite impunctate; clavus not narrowing posteriorly, commissure distinct, and at least half as long as scutellum. Fore femora sometimes much swollen (Ischomodemus) Blissinae

Head across eyes very broad, as wide or wider than posterior margin of the pronotum. Tylus usually sulcate. Hemelytra convex and plainly punctate; clavus commonly narrowing posteriorly; commissure usually absent or very short. Fore femora moderately incrassate and unarmed Geocorinae

6. Anterior femora much swollen and armed with numer-teeth. Exterior vein of corium not parallel with costal margin. Corium not wider than abdomen, Bucculae short, confined to front of head. Posterior coxae not widely separated Pachygronthinae

Anterior femora only moderately swollen and armed with a single tooth. Corium expanded, wider than abdomen; exterior vein sub-parallel with margin of corium. Bucculae extended through the head. Antennae inserted close to Bucculae. Posterior coxae widely separated Oxycareninae.

---H. G. Barber.
Subfamily Lygaeinae Stal.

Key to Tribes and Genera.

1. Apical margin of corium straight, not simuate inwardly.
   Exterior apical angle of antenniferous tubercles obtuse or sub-obtuse. Last dorsal segment of male truncate. Genital segment of male not foveate.
   (Tribe Lygaeinae) ........................................2

Apical margin of corium inwardly simuate. Apical angle of antenniferous tubercles prominent, acute or sub-acute. Sixth dorsal segment of male rounded. Genital segment of male foveate. (Tribe Orsillini) .................3

2. Posterior margin of pronotum before scutellum simuate; carinate anteriorly in the middle. Scutellum more or less tumid and carinate apically ..........Oncopeltus
   (See page 10)

Posterior margin of pronotum truncate; without a median keel or with keel not reaching anterior margin. Scutellum not tumid; with a longitudinal keel, commonly joined to a transverse keel at base ..........Lygaeus
   (See page 10)

3. Basal segment of antennae surpassing apex of tylus. Head moderately elongate. Rostrum short, its apex scarcely reaching upon abdomen ........................................4

   Basal segment of antennae not reaching apex of tylus. Head much elongated. Rostrum long, reaching beyond middle of venter .......................... Belonochilus
   (See page 15)
4. Costal margins of hemelytra straight throughout, parallel or converging posteriorly. Eyes prominent; exposed area back of eyes greater than half of width of eyes. Bucculae less than half the length of gular area. Apex of orifices exteriorly, prominently auriculate

Ortholomus

(See page 16)

Costal margins of hemelytra straight only at base, if at all. Eyes not so prominent. Bucculae variable. Apex of orifices suddenly abbreviated, rarely subauriculate

Rysius

(See page 16)

Oncopeltus Stal.

O. fasciatus (Dallas).

"The largest and showiest member of the family in Kansas.

Measures fully 15 mm. to tip of membrane. The hemelytra, lateral margins of pronotum and a Y-shaped mark on the head, red with a broad band across the middle of the wings and the membrane, black.

This species is fairly common upon milk-weed throughout the United States." — H. G. Barber.

Summer Co., Sept. 1926, (H. T. A.)

Douglas Co., July 1923, (P. A. R. )

Lycessus Fabricius.

Key to Species.

1. Pronotum black provided with a postmedian transverse red band or three red spots, remote from posterior margin. Venter
most commonly red with fascia at anterior angles of segments 2-5 and all of sixth and genital segments black. Odoriferous orifices black. Head with red fascia at least at base. Larger species, 10-12 mm.

2. Pronotum unprovided with a transverse postmedian red band, remote from posterior margin. Species smaller

3. Membrane entirely black without pale margins or white discoidal or basal spots. Clavus anteriorly red. Head with a Y-shaped red fascia, the anterior arms of which are extended beneath the antenniferous tubercles.

4. Membrane pale margined, with or without white discoidal spots, clavus either entirely black or anteriorly red. Red fascia at base of head most commonly reduced in size

3. Clavus entirely black. Membrane variable, either only narrowly margined with white and occasionally furnished with less conspicuous white discal spots (Eastern forms) or broadly margined and furnished with conspicuous white discal spots (Western forms).

(See page 13)

Clavus anteriorly red. Membrane narrowly margined and most

(See page 13)
commonly furnished with white discal spots which are
often reduced and sometimes wanting ....reclivatus.
(See page /3 )

corium bright red. Membrane very narrowly and evenly
white margined. Sixth and genital segment black ....

..........................................................belfrangi.
(See page /4 )

Pronotum not entirely black. Odoriferous orifices pale.
Commonly the anterior, lateral at least in part and
most frequently the posterior margin of the pronotum
red or pale or the latter trimaculate with red ....5

5. Posterior lobe of pronotum, corium, venter except genital
segments and small vittae red. Anterior margin of
pronotum, clavus, posterior margins of corium, buccu-
lae, acetabulae, anterior margin of prothorax and
posterior margins of all pleurae conspicuously white
or pale yellow .........................................biocrasis.
(See page /4 )

Posterior lobe of pronotum, corium, clavus and venter en-
tirely or for the most part fuscous. Costal margin
only of hemelytra red. Sunken disc of pronotum on
either side of post median ridge closely and coarsely
punctate. Membrane sometimes with a lunate white
spot near base........................................alteralis
(See page /5 )
L. turgidus Fabricius (See Plate 2)

"A much more uncommon and narrower form than Lymenea kalmii but rather closely resembling it in size and markings. The anterior half of the clavus and a Y-shaped mark on the head always red. The membrane is always entirely black." - H. G. Barber.

L. kalmii Stal (See Plate 2)

"Black, with the red markings of the hemelytra forming a cross; a spot on the vertex of the head and a transverse fascia on the pronotum, red; the latter may be broken up into three large spots. Clavus and membrane black, the latter narrowly margined with white. Size 11-12." - - H. G. Barber

A common milk-weed species occurring throughout the United States.

L. reclivatus Say (See Plate 2)

"Body black, opaque, with a somewhat cinereous shade; head with a rufous spot on the vertex; thorax unarmed, with an obsolete, indented, transverse, punctured line before; three rufous spots behind the middle of the edge, to the posterior angle, and separated from the intermediate spot by a small velvet black one; scutell a little elevated on the basal disc; hemelytra with a rufous, somewhat reclinate line from the numeral angle to the tip of the coriaceous portion, a velvet black spot on the middle, and a minute one at the inner basal angle; membraneous portion deep black, polished; a large rounded geminate spot in the middle
edge, and two small subtriangular ones at base, white; venter
rosaceous, a double series of spots beneath, and one series each
side, black. Length more than two-fifths of an inch.

    Resembles L. turcicus Fabr., but is at once distinguish-
able by the large white spot on the membranous moiety of the
hemelytra." --- T. Say.

L. balfregii Stal

(See Plate 2)

Pronotum entirely black, odoriferous orifices black, corium
and clavus bright red. Membrane very narrowly and evenly white
margined. Sixth and genital segments black. Bussulae variable
but commonly high and semi-circular elevated. Bucculae,
acetabulae, anterior margin of propleurae and posterior margins
of pro- and mesopleurae rather broadly and conspicuously pale.
Size, 8-9 mm long.

L. bicruca Say

(See Plate 2)

"Body red; head black; stemmata remote, inserted near the
eyes; projections for the reception of the haustellum, whitish;
thorax nuchic, posterior angles rounded, not sallient, a large
transversely oblong-quadratu, black spot before the middle, not
attaining the anterior or lateral edges, partially interrupted
in its middle by a reddish subrunciate line; posterior edge
yellowish; scutel black, an indented, large, triangular, pale
spot each side on the disc; Hemelytra, membranaceous tip black
with a whitish edge; coriaceous portion red with a linesolar
yellowish margin, which on the costal edge becomes red towards
the humerus, inner submargin and edge with a black line; pectus and postpectus black, segments broadly margined with pale; feet black; stigmata and anus black. Length about seven-twentieths of an inch." — T. Say.

L. lateralis Stal

(See Plate 2.)

Head black: collar red; pronotum with a median ridge, with a sunken disc on either side closely and coarsely punctate. Posterior margin of pronotum trimaculate with red. Orifices, legs, and venter black. Costal margins of hemelytra red. Membrane very narrowly and evenly white margined.

Rostrum black reaching to hind coxae. Antennae covered with very small silvery hairs. Size about 8 mm.

Belonochilus Uhler.

D. muenius Say

"Body greenish yellow: head long, the tip extending beyond the first joint of the antennae: antennae pale yellowish; first joint rather short; second joint a little longer than the third; fourth joint tinged with honey-yellow: thorax with separate punctures, anterior edge and dorsal line impunctured; transverse indentation interrupted by the dorsal lines: scutel pale rufous each side; hemelytra with a pale rufous spot at tip of the corium; membrane with an obsolete fuliginous line in the middle: tergum on the lateral margin with pale rufous spots: beneath tinged with rufous; feet pale: rostrum extending to the tip of the abdomen. Length less than one-fifth of an inch." — T. Say.

- Douglas Co.

(E. S. Tucker)
Ortholomus Stal

O. scolopax (Say)

"Body yellowish, inclining on the head and scutell to obscure fulvous; punctured; head, punctures obsolete, tip a little longer than the basal joint of the antennae; antennae black; second joint slightly longer than the third; thorax with the anterior margin and transverse impressed line black; scutel blackish each side of the middle; the middle line unpunctured; hemelytra, corium yellowish, a dull rufous spot at its tip; membrane milky white with pale brownish spots; tergum fulvous spotted with black as well on the disc as on the margin; beneath more or less spotted with blackish; blackish along the middle; around the origin of the feet yellow; feet obscurely annulated; rostrum extending to the middle of the venter.

Length less than one-fourth of an inch.

Often confused with the preceding species, which is, however, much paler with a longer head and rostrum, the latter extended nearly to the tip of the abdomen." — T. Say.

Linn Co., 1915. (R. A. Beamer)

Mylius Dallas

H. californicus Stal

This species is very common in Kansas. It is larger than the other species measuring around 5-6 mm. color pale ochraceous, with head, pronotum, scutellum and legs punctate with fuscous. The principal veins of the corium and the legs are spotted with ferruginous. Costal margins of corium straight
at base for a distance less than half of scutellum then
abruptly expanded. Punctuation less than half the length of gular
region of head.

Clark Co., Norton Co., Hamilton Co., (Snow); Marion Co.,
1923, (C. O. Bare).

N. ericea (Schilling)  (See Plate 3 )

Antennae golden yellow, testaceous, or blackish, the first
segment either pale or black. Pronotum golden yellow, strongly
punctate with indefinite lines, slightly convex, not depressed
at posterior angles. Scutellum golden yellow punctured with
black. Venter yellow, spotted with brown. Legs testaceous,
femur marked with black dots or entirely black. The form of
the males is distinctly narrower than that of the females.

Commonly known as the false chinch bug.

Rawlins Co., Decatur Co., Greely Co., (P. X. Williams);
Douglas Co. (Snow).

N. ericea minutus Uhler  (See Plate 5 )

"Grayish fulvo-testaceous, pubescent, punctate with black,
narrow, with the outer margin of the hemelytra nearly straight.
Head of medium length, comparatively acute, pale dull fulvous,
close punctate except on the immediate base, the punctures of
the sides especially black, a grooved line midway between the
eye and the tylius; throat black, covered with small punctures,
sericeous pubescent, with a white line next the eyes; antennae
fulvo-testaceous, the basal joint mostly black, reaching a
little beyond the tip of tylius, second joint about one third longer than the third and both piceous at tip, the fourth long blackish; rostrum reaching behind the middle coxae, blackish piceous, sometimes paler at base. Frontum subquadrate, a little wider than long, coarsely punctate with black, especially on the sides of disc, the fulvous color of the middle of head carried back as a line between the callosities, the callosities and adjoining sutures and a line each side of the convex posterior lobe black, the humeral callosities and a short line on the middle of the posterior border whitish. Immersi nearly surrounded by black. Pectoral areas black, minutely sericeous pubescent, coarsely punctate anteriorly, with a series of large white spots, including the coxae, extending from behind the throat to the metapleura, the outer angle and posterior margin of the metapleura and collar next the throat whitish or white, legs dull fulvo-testaceo-us, the femora mostly black beneath. Scutellum fulvo-testaceous, coarsely punctate and with a black mark on each basal angle, the middle line black, including the blunt base of the middle carina, which becomes very slender on the depressed apex of the scutellum. Hemitlytra whitish, minutely pubescent, obsoletely and minutely punctate, with the veins and inner and posterior margin interruptedly streaked with brown, the apex of the clavus with a brown dot; membrane long, whitish hyaline, with a few brown fleacts near the middle and from thence outwards. Abdomen piceous or blackish, narrow, pol-
ished, closely covered with fine white pubescence. Length to
tip of abdomen 2-3.5 mm." —— P. R. Uhler.

Hamilton Co., Douglas Co., (Snow) Clark Co.,
(F. X. Williams).

Subfamily Cyminae

Key to Tribes and Genera

1. Head without a curved longitudinal sulcus before each
cell; apical angles of antenniferous tubercles not prominent; terminal segment of antenna longer
than third. Scutellum equilateral, with commissure shorter than the scutellum. Hemelytra com-
monly hyaline, not closely punctate all over.
Orifices exteriorly extended and produced into a
tooth at apex. (Tribe Ischnorhynchini) ...........

Ischnorhynchnus

(See page 20)

2. Head with a curved longitudinal sulcus before each
cell; apical angles of antenniferous tubercles
prominent, acute; terminal segment of antenna
shorter than third. Scutellum wider than long;
clavus widened posteriorly; commissure much long-
er than scutellum. Hemelytra not hyaline, strong-
ly and densely punctate all over (Tribe Cymini)...

Cymus

(See page 20)
Ischnorhyncha Fieber

1. resedae Stal

Determined as Lygeus seminatus Say, Hemip. New Harm.,

14, 7.

Body dull greenish-yellow; head dull fulvous, blackish
each side behind; antennae obscure rufous; first joint, in-
cisures and terminal joint black; rostrum extending a little
beyond the origin of the posterior feet: thorax with the trans-
verse impression rather deep and blackish; scutel dull fulvous,
blackish on the basal margin; hemelytra on the corium tinged
with yellowish, almost hyaline, and having on the middle two
approximate, abbreviated fuscous lines and on the posterior edge
four or three fuscous, small dots; membrane pellucid; beneath
black-piceous; a white line over the insertion of the posterior
pairs of feet, and a honey-line over the anterior pair: feet
honey-yellow, immaculate tarsi blackish. Length three-twenti-
esths of an inch.

Cymus Hahn

Key to Species

1. Pronotum, at least anteriorly, provided with an elevated
pale, longitudinal, calloused ridge. Second
antennal segment scarcely shorter than third. Head
wider than long, basal segment of antenna extended
about to apex of head .................. luridus

(See page 2/ )
Pronotum without a distinct median longitudinal calloused
ridge. Second segment of antenna much shorter than
third. Head about as long as wide; basal segment
of antenna not reaching to apex of head...angustatus
(See page 21)

G. luridus Stal
(See Plate 3)
Pale yellow-testaceous, quite frequently conspicuously
tinged with red. The terminal segment of the antenna is fully
one-third shorter than the third.

Clark Co., Douglas County., (Snow).

G. angustatus Stal
(See Plate 3)
Color, pale ochraceous verging into castaneous on the head,
pronotum and scutellum, with a piceous spot at the apex of the
clavus and the apical angles of the corium. The basal segment
of the antenna does not reach to the apex of the head.

Logan Co., Douglas Co., (F. X. Williams); Lyons Co.,
(C. O. Bare).

Subfamily Blissinae

**Key to Genera**

1. Body elongate; abdomen over twice as long as head and
   thorax. Apical margin of corium straight. Anterior
coxal cavities closed behind, along the posterior
margin of prosternum. Antennae longer than head,
thorax and scutellum together. Rostrum short, its
apex not reaching past the middle coxae. Scutellum
sub-equilateral. \hspace{1cm} \textit{Ischnodemus}.
(See Page 22)

Body shorter; abdomen less than twice as long as head and thorax together. Apical margin of corium sinuate before apex of clavus. Coxal cavities open along posterior margin of prosternum. Width of head across eyes about one-half the diameter of posterior margin of prothorax. Antennae about as long as head, thorax and scutellum together. Rostrum longer, reaching past middle coxae. Scutellum wider than long. \hspace{1cm} \textit{Blissus}.
(See page 23)

\textit{Ischnodemus} Fieber

\textit{I. falicu} Say
(See Plate 3)

"Body blackish, elongated somewhat depressed; antennae short, robust, hairy; second joint longest; thorax of the basal margin piceous; transversely a little depressed in the middle and with a longitudinal indentation before the middle; scutel with a carivate line; hemelytra shorter than the abdomen, dull yellowish, with brown nervures; corium short and very oblique at tip; membrane long but little different in appearance from the corium; abdomen, margined with rufous; thighs a little thickened. Length over three-twentieths of an inch." --- T. Say.

Commonly referred to as the false chinch bug.

Lyons Co., Douglas Co., 1923, (Beamer).
Blissa Burmeister

**B. leucantera (Say) Chinch Bug**

(See Plate 3)

Body long, blackish, with numerous hairs; antennae, rather short hairs; second joint yellowish, longer than the third; ultimate joint rather longer than the second, thickest; thorax tinged with cIvereous before, with the basal edge piceous. heme-lytra white, with a blackish oval spot on the lateral middle; rostrum and feel honey-yellow; thighs a little dilated. Length about 3.5 mm.

**B. leucantera**, commonly known as the chinch bug, is a very serious pest of grains in Kansas.


Subfamily Geocorinae

**Key to Genera**

1. Head extended laterally, eyes obviously stalked; inner margins of eyes strongly converging throughout; not in contact with anterior lateral margins of pronotum. First segment of rostrum shorter than second or sub-equal to it. Ocelli commonly placed midway between inner margin of eye and middle of vortex. Head smooth impunctate....*Hypogeocoris*.

(See page 24)

Eyes not so obviously stalked and commonly contiguous to anterior lateral margins of pronotum; inner margins, at least anteriorly, more commonly sub-parallel. Head commonly more or less punctate or
rugulose. Ocelli in most cases placed closer to inner margin of eyes than to middle point of vortex. First segment of rostrum longer than second .......... (See page 24)

Hyposecoria Montandon

(Isthmocoris McAttee)

H. piceous (Say) (See Plate 4)

"The head is extra wide, the eyes set upon short, broad stalks. Its color is very shining piceous, with the head above and below, base of first antennal segment, legs and acetabulae ochraceous. The surface, except the head, sparsely but coarsely punctate. In brachypterous forms at least, the clavus is not plainly differentiated and is level with the corium."

---H. G. Barber.


Geocoris Fallen

Key to Species

1. Scutellum is plainly longer than wide; not colored uniformly, with an enlarged yellowish, punctate area on each side ................................. 2

Scutellum form an equilateral triangle; this part colored uniformly piceous, without the yellow or griseous area on each side ...................... uliginosus. (See page 25)
2. Pronotum with anterior third darker, with two transverse yellowish spots. Abdomen black beneath .......... 

....................................................... decoratus.

(See page 25)

Pronotum more uniform in color, without the two transverse yellowish spots. Abdomen creamy white along median line ........................................... punctipes.

(See page 26)

G. uliginosus (Say)  
(See Plate 4).

"Body blackish, punctured; head with an oblique impressed line before the middle, and a yellow exterior edge; hemelytra whitish; inner portion of the corium fuliginous; sexual carina or ovipositor yellowish; rostrum and feet yellowish; posterior thighs dusky at tip. Scutellum forms an equilateral triangle. Length to tip of hemelytra over one-tenth of an inch."—T. Say

Douglas Co., (P. A. Read); Douglas Co., Norton Co., 1925,  
(R. A. Beamer).

G. decoratus Uhler  
(See Plate 4)

"Narrow-subovate; prevailing color black, polished. Head wider than the pronotum, the eyes obliquely very prominent, brown large: face deep black, very closely and finely punctate, the apex of the tylus and cheeks pale yellow; antennae slender, black, the joints terminated with white, the apical joint dusky; rostrum reaching to the posterior coxae, piceous-black. Pronotum transverse, very slightly narrower in front, the sides of anterior margin obliquely truncated, with the angles scarcely rounded, black, very closely punctate, almost flat, the anterior edge and
a small spot on its middle, the lateral margin, the humeral angled broadly, and a large spot on the middle of the posterior margin, ivory-like and pale yellow; callosities transverse, impunctate, highly polished, and deep black. Sternum and pleural pieces deep black, the latter polished, less coarsely but densely, in part confluenfly, punctate; a quadrangular spot above each acetabular cap, the ostego and the apexes of the coxae white, gular callum white; femora blackish-piceous, testaceous at tip; tibia dusky at base, the remainder of the tarsi paler, with the tip of the apical joint and the nails piceous. Scutellum black, coarsely and moderately closely punctate, the margins, particularly at tip, tinged with testaceous. Hemelytra pale yellowish, punctate with brown, and with a brown cloud on the disc posterior margin; membrane short, white, abdomen black, very minutely punctate and pubescent.

Male generally paler, with more whitish-yellow on the front of the face; the whole basal half pronotum pale; the legs yellow, pointed with brown; and the margins of the meta-pleura more widely white; antennae sometimes whitish. Length to tip of venter 3-4 mm." --- P. R. Uhler.


G. punetariae (Say)  (See Plate 4 )

"Body robust, oval, whitish-sinereous, with numerous, obvious, dusky, profound impressed punctures: Head rather wider
than the body, dusky with a longitudinal yellowish line before: antennae whitish above; last joint rufous; thorax with two small transverse impunctured spots before the middle; a little dusky on the disc; scutellum with a slightly carinate line, and each side of the middle a longitudinal dull yellowish spot; hemelytra with deep punctures; corium with a blackish marginal line on the middle of tip; membrane whitish; feet yellowish."

----------T. Say.

Subfamily Pachygronothinae

Key to Genera

1. Antennae short; first segment shortest of all, not reaching apex of head and not clavate at apex. Head strongly deflexed from base. Scutellum sub-equilateral. Apical margin of corium toward apex of clavus more or less sinuate and outer apical angle obviously rounded. First tarsal segment of hind legs short, about as long as second and third together ........................................Phalecgus

(See page 28)

2. Antennae longer; first segment longest of all, far surpassing apex of head and clavate or swollen at apex. Head not strongly deflexed. Scutellum commonly longer than wide. Apical margin of corium straight, with outer apical angle sub-acute. First tarsal segment of hind legs longer than second and
third together

Phleogynus Stal

R. abbreviatus (Uhler) (See Plate 4)

"A very common species occurring in both the brachypterous and macropterus forms. The head is short and wide, deflexed from base so that the front is almost vertical. The basal segment of antennæ does not reach beyond apex of head. The much swollen anterior femora are armed with a number of unequal-sized sharp teeth. The general color is pale tawny-brown, with the head, pronotal callosities, middle of scutellum, posterior margin of corium, alternate bands on connexivum, piceous or verging into castaneous frequently. Parts of the head, pronotum, scutellum and ventrally, clothed with very fine short silver-white hairs. The apex of the femora and the tibiae are banded with pale yellow. Size 4.5 mm." ——— H. C. Barber.

Franklin Co., Montgomery Co., Douglas Co., (Beamer and Lawton)

R. annulicrus Stal (See Plate 4)

Ferrugineous; head, pronotum, scutellum and hemelytra punctate. Color a honey-yellow. Veins of membrane white. Fore femora brown above and black beneath, greatly enlarged, armed with several teeth. Antennæ short, only about twice as long as the head. Rostrum short, reaches a little past the first coxae. Deeply punctate beneath. Ovipositor yellow. Length 4.5 mm.

Hamilton Co., (S. J. Hunter); Stevens Co., Douglas Co.,

Norton Co., (F. X. Williams.)
Q. *dorsalis* (Say)

Body dull honey-yellow, punctured; head with an obsolete whitish line; antennae rather robust, dull rufous; joints a little thicker to the tip; first joint longest; remaining joints sub-equal; ultimate joint of the usual form but hardly longer than the preceding one; thorax, transverse line not impressed; longitudinal whitish line not reaching the head or scutell; corium with a blackish edge on the inner side at tip; membrane with a double interrupted dusky line; abdomen dark livid, with a yellowish margin; pectus gray, darker in the middle; feet yellowish; thighs with dusky punctures; anterior pair blackish beneath, and armed with many spines. Measures about 6 mm. long.


Subfamily Rhyparochrominæ

**Key to Tribes**

1. With the two glandular, opaque spots, laterally on the fourth ventral segment of the abdomen, widely separated, posterior one placed closer to posterior of segment than to anterior spot

2. Posterior glandular, opaque spot of fourth segment of abdomen placed closer to anterior spot, most commonly remote from posterior margin of segment, sometimes furnished with a third posteriorly placed spot. With
lateral margin of pronotum most commonly expanded; this frequently foliaceous between the two lobes ....

.......................................................Lethaeini.
(See page 48)

2. Pronotum with lateral margin of anterior lobe not obtuse or terete but either calloused or carinate or expanded or lateral emargination filled in by a foliaceous expansion or furnished within lateral margin with a series of punctures or propleura with a linear impression within lateral margin. Pronotum rarely strongly constricted transversely; rarely furnished with a constricted ring-like collar, unless head is strongly exserted, or at most only provided with a depressed series of punctures within anterior margin. Body most broad with head most commonly almost or quite immersed to eyes ...........3

Pronotum with lateral margins of anterior lobe obtuse, terete, neither calloused, carinate nor expanded nor longitudinally impressed within lateral margin of propleura; most commonly strongly constricted transversely to form two distinct lobes and most commonly provided with a constricted ring-like collar. If collar is absent then the head is not at all or very slightly exserted. Body commonly less depressed, more narrow-elongate ........

.......................................................Hydochini.
(See page 32)
3. Entire lateral margin of pronotum and costa, more or less laminate-expanded and most commonly in part, pale; this margin rarely, only keeled, in which case the first segment of antenna is extended far beyond apex of head and genital segment of male is tuberculate; pronotum including, most rarely entirely black, posterior lobe most commonly pale or variegated with pale. Posterior tibiae furnished with long rigid subspiniform setae or bristles .................4

Lateral margins of pronotum not at all or less entirely laminate-expanded, most commonly either carinate or longitudinally impressed within lateral margin of propleura. Pronotum most commonly black, ferrugineous or castaneous, with posterior lobe rarely paler, punctate with black. Head rarely strongly exserted, if so, then is a constricted ring-like collar present anteriorly on the pronotum (Ozophora). Hind tibis most commonly without rigid bristles only, most frequently pilose .................. Rhyparochromini. (See page 47)

4. Antennae nude or with shorter pubescence, first segment sometimes furnished with a few short setae. Lateral, more narrowly expanded margin of pronotum not at all or rarely sparingly punctate; anterior disk of pronotum most commonly smooth or sparingly punctate,
rarely densely punctate .................. Bassini.  
(See page 45 )

Three basal segments of antennae provided with rigid setose bristles. Lateral, more widely expanded margin of pronotum and corium commonly, profusely punctate. Clavus irregularly punctate. Dorsal parts commonly pale and profusely punctate ............... Conidinotini.  
(See page 47 )

Tribe Myodochini

Key to Genera

1. Head exerted or not, but never drawn out into a long cylindrical neck. Collar more rarely absent ........... 2
   Head very much exerted, drawn out into a long cylindrical neck at base; longer than pronotum. Two lobes of pronotum sub-equal. Body narrow elongate. Hind tibiae furnished with long setose hairs. Basal segment of hind tarsus about three times as long as second and third together. Neocopterus forms only ......
   ..................................................................................................................... Myodochus.  
   (See page 35 )

2. Pronotum commonly constricted at middle or a little behind middle; anterior lobe black, in all neocopterous forms and in most brachypterous never or scarcely ever more than twice as long as posterior lobe; if more than doubly longer than the head is not exerted (as in brachypterous forms of some (Ptochiomera) .... 3
Anterior lobe of pronotum three or four times as long as posterior lobe, with transverse constriction between lobes commonly shallow or ill-defined. Head distinctly exerted. Fore tibiae of males provided with a submedian tooth. Antennae elongate. Basal segment of posterior tarsus two or three times as long as second and third segments together. Brachypterous forms common ........7

3. Head more or less distinctly exerted, commonly immersed to eyes. Pronotum with a constricted ring-like collar.
Body more or less elongate .........................4

Head not at all or scarcely exerted, commonly immersed to eyes. Pronotum without a constricted ring-like collar, anterior margin of pronotum depressed, punctate. Basal disc of scutellum depressed before a premedian, transverse or crescentic ridge, posteriorly carinate. Fore femora armed with several teeth. In brachypterous forms membrane may be almost or entirely wanting, the clavus with three rows of punctures, flat, not deflected to corium and anterior lobe of pronotum swollen and more than twice the length of posterior one. First segment of antennae exceeding apex of tyulus by one-half its length .............................................. Ptochimera (See page 36)

4. Head more commonly contracted back of eyes; postocular space commonly sub-equal to or sometimes shorter than space between base of antennae and eye ....................5
Head strongly exerted, forming a short neck at base; postocular space about four times as long as space between base of antennae and eye. Eyes placed about midway on head. Hind tibiae provided with five rigid bristles. Basal segment of posterior tarsus about as long as second and third together. Macropterous and brachypterous forms ....................Heraeus
(See page 37)

5. Second and third ventral abdominal segments not furnished with finely strigose lunate vittae ..................6

Second and third ventral abdominal segments furnished on each side with a finely strigose, lunate vittae ....

..............................................................Ligyrocoris
(See page 37)

6. Two lobes of pronotum separated by a deep, clean cut, transverse constriction. First segment of rostrum not reaching base of head. Hind tibiae most commonly furnished with short bristles ................Orthace
(See page 38)

Two lobes of pronotum commonly separated by a more shallow obtuse constriction. First segment of rostrum commonly reaching base of head. Posterior tarsus with basal segment not more than twice as long as second and third together. Body, legs and antennae furnished with long setose hairs, the hind tibiae with a few rigid bristles apically .................Perigynes
(See page 40)
7. Anterior lobe of pronotum impunctate, demarked from posterior lobe by a transverse impressed line; provided with a distinct ring-like collar. Basal segment of antennae with a few setose bristles. Ocelli absent. Fore tibia tooth of male at middle or posterior to middle. Hind tibia provided inwardly and outwardly with rigid bristles. Basal segment of hind tarsus three times as long as second and third together. Large species

........................................................................Chromodus.  
(See page 40)

Anterior lobe of pronotum sparsely punctate, not indicated by an impressed line; anterior margin depressed punctate; two lobes separated by an obtuse simus. Basal segment of antennae without setose bristles. Ocelli present. Fore tibial tooth of male anterior to middle. Hind tibia with a few setose bristles inwardly. Basal segment of posterior tarsus about twice the length of second and third together. Smaller species

........................................................................Pseudochromodus.  
(See page 41)

*Hydchoeus* Latreille

*Hydchoeus* serripes Oliver  
(See Plate 4)

A very distinctive species by reason of its long, slender, cylindrical neck. The head is shining, the pronotum dull black; the hemelytra brown with pale margin. By reason of the slender body the legs seem rather long, the fore femora being longer than
the intermediate ones; the former as well as the posterior femora are apically piceous. The apex of the second of the rostrum does not reach the base of the elongated head. The hind tarsus is very long, at least three times as long as second and third together. About 8–9 mm. long.

This species is found under logs, boards, etc.


Ptochionera Say

P. Nodosa Say

A Small species, about 3 mm. long, which is easily identified by the incrassate character of the last two segments of the antennae, especially noticeable in the females. The piceous anterior lobe of the pronotum as well as the scutellum and hemelytra. The head, scutellum except on the carinae and three or four longitudinal fascia on the hemelytra pale, castaneous or ferruginous.

The legs and first two segments of the antennae are pale yellow, the swollen third segment of the latter is piceous while the fourth is mainly ferruginous. While in most of the other species of this tribe the scutellum is nearly plain, here it is strongly keeled behind a sub-basal, crescentic, transverse ridge.

A ground species, commonly sheltering under objects.


P. Clavicornis Uhler

A little smaller than P. Nodosa, with the last two segments of the antennae, likewise much swollen. Color dull castaneous
brown, closely and coarsely punctate with fuscous, with few strongly contrasting colors. The transverse constriction between the two lobes of the pronotum much more shallow than in the preceding.

Heragus Stal

H. plebeius Stal (See Plate 4)

General coloring and shape much as in Myodesmus serripes but considerably smaller and less slender — about 5 mm. long. The base of the dull black head is not drawn out into a long cylindrical neck and the eyes are set midway between base and apex of head. Basal segment of rostrum does not quite reach to base of head. Basal segment of posterior tarsus only twice as long as second and third segments together. Anteriorly this insect is quite pilose or hairy.

Found sheltering under boards and other loose objects. Partly predaceous.

Lycororis Stal

L. diffusus (Uhler) (See Plate 5)

Head, anterior lobe of pronotum, apical half of third and all of fourth segment piceous black. Four fascia on the posterior lobe of the pronotum and most of the inner part of the hemelytra dark castaneous-brown. The costal margin pale throughout, much more narrowly so opposite the post-median and apical castaneous spots; in other words the transverse post-median and apical fasciae do not quite reach the outer edge of the hemely-
Near the inner apical angle of the corium is a conspicuous pale spot. The legs are variable, most commonly pale, with the femora often entirely pale ferrugineous or sometimes apically infuscated. The head, pronotum and scutellum are provided with quite a number of long setose hairs. The membrane is embrowned, with the nervures and a small spot at apex pale. Apex of membrane extended to tip of abdomen. 5-6 mm. long.

*Leptomecis nitidulus* Uhler

Dorsal parts, antennae and legs sparsely setose. Hind tibiae scarcely setose between the fine bristles. Membrane triangularly pale at apex. The venter of the female has a sickle-shaped callosity running backward from the base. The rather strongly curved anterior tibia of the male is unarmed and the teeth of the fore femora are not set in a single row; the outer series consist of a few shorter teeth before the apex, the inner series of several irregular larger teeth, the first one about a third away from base between which and apex are about five or six stout teeth, either one or two near the middle usually being the largest of the series and those before apex reduced in size.

*Orthos* Dallas

A small species measuring some 4 mm. long. In common with most of the species of this tribe the head, anterior lobe of the
pronotum and scutellum are dull piceous-black; the posterior lobe of pronotum infuscated but paler, particularly in the middle. The hemelytra are grayish, much punctured with fuscous and with a conspicuous pale spot near the inner apical angle of the corium. The antennae are mostly pale except for the terminal segment, which is dark brown. The much swollen fore femora, except the knees, and a preapical ring on the middle and hind pairs, piceous. Found commonly under stones, sticks, etc., particularly in fall of year.

_Douglas Co. (Snow); Douglas Co. (P. A. Readio)._

_Q. bilobata (Say) (See Plate 5)_

Body pale honey-yellow or dusky, somewhat hairy; hemelytra whitish, with a fuscous band and spot at tip of corium; antennae, terminal joint fuscous; rostrum, second joint whitish, third dusky; thorax with the anterior lobe longer, transverse quadrato; posterior lobe not more elevated, but separated from the entire body by a profound contraction, and a little wider; thighs pale honey-yellow fuscous towards their tips; anterior pair dilated, spinous, beneath blackish; pectus and postpectus black on the middle. Venter black, margin piceous.

Length one-fifth of an inch.

This varies considerably in the coloring of the head and thorax, which are sometimes even obscure cinereous, with obsolete blackish lines, and on the posterior part of the thorax of many specimens are three distinct black lines.
P. constrictus (Say)  

(See Plate 5 )

The dorsal parts, legs and antennae are quite pilose. The costal margin of the corium is pale interrupted by a transverse fascia behind middle and apex dark brown in common with the inner field of the corium. Membrane dark brown with some of the veins in part pale. The legs are mostly pale. The antennae pale with first, apical part of second, third and all of fourth segment brown, pilosity is quite distinctive. The basal segment of the hind tarsus is relatively shorter, about twice the length of second and third together, and the fore femora is armed.

Cnemodus Herrich-Scheffer

G. mavortius (Say)  

(See Plate 5 )

"An elongated species, 9 mm. long, with piceous-black body and long pale legs. It is chiefly characterized by the elongate and often inflated fore-lobe of the pronotum, which is at least three times as long as, and most often wider than, the posterior. The costal margins of the hemelytra are pale. The eyes are not in contact with the pronotum but set mid-way between the base of the head and tip of antemiferous tubercles. Ocelli are wanting. The antennae are long, with the basal segment extended much more than half beyond tip of head, basally pale with the fourth segment embrowned. The elongate fore femora are armed with an outer row of five or six strong teeth and an inner row of five or six smaller teeth. The fore tibia of the male is strongly bent near
base and armed behind middle with a strong, curved tooth. This species occurs most commonly in the brachypterous form with membrane poorly developed, scarcely extended beyond apex of corium."

--- H. G. Barber.


**Pseudocnemochus** Barber

**P. canadensis** (Provancher)  
(See Plate 5)

Resembles a small *C. meavortius* Say, but it is pale castaneous brown in place of black, with the humeral angles, costal margins of the hemelytra, antennae and legs for the most part, stramineous-yellow. The fore lobe of the pronotum less often inflated, is relatively shorter than in the preceding species, and is not demarked from the anterior lobe by an impressed line. The antennae have the apical half of the third and all of the fourth segment embrowned. The legs have the spines of the femora embrowned; the incrassate fore femora armed with two rows of weaker spines. The brachypterous form is also here the most common, with the membrane not extended beyond apical angle of the corium. Measures about 6 mm. long." --- H. G. Barber.

**Tribe Rhynarachromini**

**Key to Genera**

1. Anterior margin of pronotum without a ring-like collar, at most faintly impressed or provided with a series of punctures within. Pronotum strongly transverse with
margins very slightly keeled and not reflexed. Head not at all or very slightly exserted. Commissure less than one-half the length of scutellum. Hind tibia without rigid bristles. Basal segment of posterior tarsus not twice as long as second and third together.

Anterior margin of pronotum with a distinct ring-like collar; not transverse; lateral margins slightly expanded and reflexed; distinctly separated into two lobes by an obtuse constriction just before middle. Head not transverse, exserted, commonly contracted back of eyes; this post ocular space sub-equal to space between the base of antenna and eye. Basal segment of antennae stout and long, apex of tylus not reaching middle of this segment. Basal segment of rostrum reaching base of head. Clavus irregularly punctate; commissure nearly as long as scutellum. Anterior femora elongate, not strongly incrassate, armed beneath with three or four equidistant spines. Posterior tibia with short rigid bristles. Basal segment of posterior tarsus fully twice as long as second and third together.

Mostly macropterous .......................... Ozophora
(See page 43)

2. Pronotum with disc of anterior lobe black; posterior lobe testaceous punctate with fuscous; lateral margins
slightly carinate. Scutellum much longer than wide, a little longer than pronotum, posteriorly bivittate with pale. Dorsal parts dull, not pilose. First segment of antennae much shorter than second, and evidently shorter than basal segment of rostrum. Fore femora incrassate and armed with several strong and a few smaller teeth. Clavus with three rows of punctures, the middle series abbreviated. Macropterous forms only. Size larger Peritrichas

(See page 44)

Pronotum with both lobes concolorous or nearly so, ferrugineous or castaneous. Scutellum equilateral, not bivittate with pale. Fore femora slightly incrassate, unarmed. First and second segments of the antennae nearly equal, the former longer than the first segment of the rostrum. Body more or less pilose. Macropterous and brachypterous. Small species 2 mm. long Antillocoris

(See page 45)

Ozophora Uhler

0. picturata Uhler

(See Plate 6)

"Head, anterior lobe of pronotum, five rather obscure longitudinal fasciae of posterior lobe, central disc of scutellum, markings of the hemelytra and beneath, dark castaneous; sternum often darker. The following parts are pale stramineous——four obscure
facies of posterior lobe of pronotum, submarginal calloused streak on either side of scutellum, much of the hemelytra, antennae except apex of last three segments, legs with exception of a sub-apical darker ring of the posterior femora. The pale ring on the base of the terminal segment of the antenna is striking. The hemelytra are punctate with castaneous-brown and provided with an interrupted transverse fascia behind the middle surrounding a conspicuous pale spot at inner apical angle of corium; posterior angle of the corium also castaneous. Membrane embrowned, with the apex and often the veins pale. Length 6 mm.

Frequently taken by sifting among dead leaves in the late fall or found under boards on the ground." — H. G. Barber.

Peritrechus Fieber

P. fratermus Uhler

(See Plate 6)

"This bears no resemblance to the preceding species. Head, anterior lobe of pronotum and most of the scutellum dull piceous black. Posterior lobe of pronotum, apical V-shaped fascia of scutellum and hemelytra grayish; rather closely punctate with fuscous. The antennae are dark brown and finely pilose. The legs are variable, frequently pale castaneous, more often with the femora except at base and extreme apex and the tibia towards base dark brown or piceous. The enlarged fore femora armed with two or three small teeth in the middle region. Length 4-5 mm. Also frequently taken under boards or by sifting dead leaves." — H. G. Barber

Atchison Co., (R. Beamer); Wichita Co., (F. X. Williams).
Antilocoris Kirkaldy

A. pallidus (Uhler) (See Plate 6)

"One of the smallest members of the Lygaeidae. Head, pronotum and scutellum castaneous, the head somewhat shining. The hemelytra are a little paler. Membrane brownish, pale at base; in brachypterous forms fairly well developed but not reaching apex of abdomen. Dorsal parts, viewed from side, sparsely pilose. A characteristic peculiarity is the relative long basal segment of the antennae which is as long or longer than second segment and longer than the first segment of the rostrum. The legs are pale stramineous-yellow with the scarcely swollen fore femora unarmad. Length 2 mm.

This is a common species among dead leaves in damp situations." —— H. G. Barber.

Tribe Beossini

Key to Genera

1. Dorsal parts dull, not black. Scutellum distinctly longer than wide, pale or bivittate with pale. Basal segment of posterior tarsus a little longer than second and third together .......................... .......................... 2

   Dorsal parts entirely black, sub-shining; not pilose.

   Scutellum black, width sub-equal to length. Basal segment of posterior tarsus much longer than second and third together ......................... Apharma (See page 46)
2. Anterior lobe of pronotum black. Punctures of pronotal margins set with setae. Scutellum black bivittate with pale. Venter dark \ldots \ldots \ldots \ldots \ldots \ldots \ldots Sphragistikus (See page 47)

Anterior lobe of pronotum not black. Pronotal margins not set with setae. Scutellum pale. Venter honey-yellow \ldots \ldots \ldots \ldots \ldots \ldots \ldots Uhleriola (See page 46)

**Aphanus Laporte**

**A. umbrosus** (Distant)  
(See Plate 6)

A rather scarce but easily distinguished species by reason of its all black color and non-pilosity. Dorsal parts entirely black, sub-shining. Evenly and narrowly expanded lateral margins of pronotum impunctate. Antennae nearly nude. Basal segment of posterior tarsus much longer than second and third together. Measures 6-7 mm. long.


**Uhleriola Uhler**

**U. florialis** Uhler  
(See Plate 6)

As this is the only species of the genus present in Kansas, the key to the genera will serve to distinguish it. About 5-6 mm. long. Enlarged fore femora armed with a single prominent pre-apical spine. Tibiae provided with short stiff bristles.

Comanche Co., Douglas Co., (Snow);  
Cove Co., (F. X. Williams).
Sphragisticus Stal

S. nebulosus (Fallen)  
(See Plate 6)

"Often confused with Peritrichus fraternus but at once readily distinguished by the rather widely expanded, pale margins of the pronotum which are sparsely punctate and setose. The head, disc of anterior lobe of pronotum, scutellum for the most part, dull piceous-black. Posterior lobe of pronotum, two sub-apical spots on the scutellum and hemelytra for the most part, pale grayish. Second and third segments of antennae, apexes of femora and tibia pale ferrugineous; basal and terminal segments of antennae, femora and some irregular spots posteriorly on the corium dark brown or piceous. Enlarged fore femora armed with a single prominent preapical spine between which and apex are two or three minute teeth. Tibia provided with short stiff bristles. Measures 5 mm. long.

Occurs frequently in cultivated fields along with such species as Peritrichus fraternus, Emblethis vicarius and Eysius ericet, etc." — H. G. Barber.

Pratt Co., Wichita Co., Sherman Co., Douglas Co.,  
(F. X. Williams).

Tribe Gonianotini

Emblethis Fieber

E. vicarius Horvath  
(See Plate 6)

"This is the only representative of the tribe in the United States. The widely laminate margins of the pronotum and hemelytra
are concolorous with the general pale cinereous field and like it profusely punctate with fuscos. The rounded anterior angles of the pronotum extend well beyond the line of the eyes. Clavus not punctate in regular series. Anterior femora almost through-out armed with short teeth. Length 6 mm.


Tribe LETHARINI

Key to Genera

1. Anterior lobe of pronotum impunctate or obscurely punctate. Anterior tibia of males nearly straight and not abruptly expanded at apex. Antennae not decidedly pilose, nearly nude

Both lobes of the pronotum distinctly and closely punctate. Anterior tibia of males either strongly curved or abruptly bent and apically strongly expanded within. Antennae densely and finely pilose

Drymus (See page 49)

2. Dorsal parts not distinctly shining. Two lobes of pronotum demarcated by a well pronounced groove. Anterior lobe of pronotum, head, and scutellum black. Anterior margin of pronotum depressed and commonly pale, limited behind a row of punctures; lateral lamellar expansion noticeably wider between the two lobes and there most commonly pale; unprovided with a seta near each anterior angle
Dorsal parts distinctly shining. Pronotum not clearly separated into two lobes. Anterior disk of pronotum head and scutellum ferrugineous or castaneous. Anterior margins of pronotum not depressed; lateral edge of pronotum not widely expanded; provided with a long seta near each anterior angle ...............4

Pronotum with lateral margins narrowly expanded and commonly pale, the two sides sub-parallel to the rounder anterior angles much wider than head across eyes......

..................................................................................Cryphula
(See page 57)

3. First segment of antennae longer, apex of tylus not reaching middle of this segment. Head longer than width back of eyes. Lateral margins of pronotum more or less pilose. Hind tibia either with short fine bristles or pilose. Commonly 6-7 mm. long .......Eremocoris
(See page 50)

First segment of antenna shorter, apex of tylus reaching at least to middle of this segment. Head shorter, length sub-equal to width back of eyes. Lateral margins of pronotum without long soft hairs. Hind tibia almost nude. Commonly 3-4 mm. long........Scolopostethus
(See page 50)

Drymus Fieber

D. umas (Say) .............................................................. (See Plate 6)
Pale and small species measuring some 5 mm. long. The later-
al margins of the pronotum more strongly accurately concave between the two lobes with these margins gradually rounding anteriorly from about the middle of the anterior lobe; the narrowly expanded lateral margins a little paler than the general surface. The anterior lobe darker and more finely punctate than posterior lobe. The costal margin of hemelytra more narrowly expanded and the whole surface anteriorly generally paler. This species is commonly found under dead leaves at base of alders.

Eremocoris Fieber

E. ferus (Say)  
(See Plate 6)

Head, anterior lobe and four fasciae on the posterior lobe of pronotum and scutellum piceous black. Lateral expansion of the pronotum, especially at the sinus between the lobes and nearly the anterior half of the hemelytra conspicuously pale. Three fasciae on posterior lobe of pronotum, posterior half of hemelytra dark castaneous. The membrane is brown with a conspicuous white spot at the outer basal angle and another opposite it at the inner apical angle, sometimes also pale at inner basal angle. The femora are dark brown, with the tibiae a little paler, the fore femora provided with a single enlarged preapical spine preceded and followed by several minute teeth. About 6 mm. long.

Scholopostethus Fieber

S. thomsoni Reuter  
(See Plate 6)

In the macropterus forms the membrane is pale throughout with brown veins, and in the brachypterous forms the membrane
does not extend beyond the apex of the hemelytra and generally is slightly pale only at the outer and inner basal angle. The lateral edge of the pronotum is more concave and the fore femora are generally dark brown and differently armed. The brachypterous form is the only one I have seen in Kansas but the macropterous form is undoubtedly in the state.

Cryphula Stal

C. parallelogramma Stal

This species is about 3-3.5 mm. long. The posterior lobe of the pronotum is somewhat demarked from the anterior one by being slightly depressed and closely punctate. Its general dark castaneous-brown coloring is relieved by touches of pale yellow at the humeral angles of the pronotum and three spots on the scutellum. The slightly expanded lateral margins of the pronotum and the corium more or less, particularly the veins, pale yellow. The antennae have the third and fourth segments brown. The enlarged fore femora are armed with three or four minute preapical teeth or tubercles, with two long setae between these and the middle. A long seta is set near anterior angle of the pronotum.

This species is commonly found under stones or dead leaves.
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G. punctipes

G. deocoratus

G. uliginosus

P. abbreviata

H. piceus

P. annulicus

O. dorsalis

H. plebejus

M. serripes

PLATE IV
PLATE V

P. nodosa

O. bilobata

P. canadensis

L. nitidulus

P. constrictus

Q. basalis

L. diffusus

C. mevortius