

[From Vol. 4, 1825, pp. 307.—345.]

Descriptions of new **HEMIPTEROUS INSECTS** collected in the Expedition to the Rocky Mountains, performed by order of Mr. Calhoun, Secretary of War, under command of Major Long.

Read June 1st, 1824.

GRYLLUS Fabr.

1. *G. æQUALIS*.—Hemelytra spotted with brown; wings pale yellowish at base, with a black band and dusky tip.

Inhabits the United States.

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Head varied with brown and light gray: thorax varied with brown and dull rufous, with a carinate line: hemelytra dark cinereous, with numerous unequal small dark brown spots: wings sulphurous at base, then a black band arcuated behind so as nearly to reach the inner angle; tip dark cinereous, darker at the angle, or with small fuscous spots on that part: feet pale cinereous, spotted with fuscous: hind thighs within with four black bands: posterior tibiæ sanguineous.

Length to the tip of the hemelytra, one inch and two-fifths.

Not an uncommon species. The thorax is not gradually raised into a carina, but the line is abrupt and of little elevation.

2. *G. NUBILUS*.—Black; wings glaucous.

Inhabits Arkansa.

Head with the frontal line not grooved; thorax with a slightly and equally elevated line; hemelytra rather short; feet dusky, tinged with dull rufous: posterior pair black, the thighs with a whitish annulation near the tip: beneath pale.

Found in abundance near the base of the Rocky Mountains, in company with the succeeding, and like it ascending into the atmosphere in great numbers.

3. *G. BIVITTATUS*.—A yellowish line each side above from the front to the tip of the hemelytra.

Inhabits Arkansa.

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Mouth white; superior orbits yellowish: thorax with an elevated capillary line, and three transverse impressed ones, a yellowish marginal line each side: hemelytra with small dusky spots 1825.]

each side, above margined with greenish yellow: wings pale green: feet pale, anterior and intermediate thighs somewhat arcuated, with a green line; posterior thighs with a green line on the exterior side and another above, which is faintly marked by two pale spots near the middle, a dusky annulation near the tip; posterior tibia green, pale towards the tip, and on the anterior side: abdomen pale with minute dusky spots; segments margined with dusky.

Length to the tip of the hemelytra one inch and three-tenths.

This species, with several others, occurred in great numbers near the mountains, and on one occasion we observed this species in company with several others, ascending to a great height in the air as if to commence a migration to a remote region.

[Belongs to *Caloptenus*, and is identical with *C. femoratus* Burm. Handb. 2, part 2, 638. *Acrydium flavovittatum* Harris, Ins. Injurious to Veg. 140, is a small variety, very common in the Atlantic States, and occasionally mixed with the larger specimens which occur in the western part of the country. It is very common on the salt marshes near Baltimore, and I have once or twice seen it in company with *C. femurrubrum* (Degeer), in considerable swarms in the air.

[Dr. Harris makes a very singular mistake in comparing this species with *Acridium olivaceum* Serv.—ÜHLER.]

ACHETA Fabr. Leach.

A. EXIGUA.—Head and thorax testaceous; feet whitish; abdomen black.

Inhabits Missouri.

Head testaceous, hairy, with obsolete dusky lines above, contracted before the eyes into a [310] short, obtuse, conical process: front vertical, trilineate, lines fuscous, convivant at the mouth: antennæ long, fuscous, pale at base: palpi white: thorax testaceous, hairy: hemelytra yellowish-white, right one entirely concealing the other: nervures (male) with but few anastomoses, at tip enclosing a large, oval, rugose, but membranous space: feet whitish; posterior thighs with a brown line on the exterior side; posterior tibia with three pairs of alternate spines, and larger ones at tip; abdomen black.

Length about a quarter of an inch. A male.

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Taken near the village of the Konza Indians. When dry, the head and thorax assume a light ferruginous color.

TRIDACTYLUS Oliv.

T. APICALIS.—Black, varied with white; wings edged and tipped with blackish.

Inhabits Southern and Western States.

Body deep black: head with a line each side, passing over the eyes, two spots at the superior base, and a line on the vertex furcate before, whitish: thorax margin and several abbreviated lines on the disk, white; feet banded and spotted with white, posterior thighs trifasciate with white; posterior tibiæ nearly rectilinear: elytra, exterior margin and common spot behind the middle, white: tergum fasciate with white. [311]

Length more than one-fifth of an inch.

This species is numerous on St. John's river, in East Florida and on the Missouri, as far as Council Bluff. It is always found on the moist shores not far distant from the water's edge.

[This is *Xya apicalis* Burm. Handb. 2, 2, 741.—UHLER.]

PENTATOMA Oliv. Latr.

1. *P. ARBOREA*.—Brownish-cinereous, punctured; clypeus emarginate and bidentate; thorax dentate and with a prominent truncated spine behind each side; feet annulate.

Inhabits Missouri.

Body brownish-cinereous, with numerous black punctures; head with a longitudinal obsolete elevated line, and an abbreviated one each side of its middle: clypeus emarginate at tip, lateral edge terminating in an angle near the tip: antennæ, base of the second joint pale: thorax unequal before, dentated each side; teeth irregular, unequal, acute; posterior angles extended into a prominent, dilated, slightly reflected, truncated projection, which has two or three small teeth: hemelytra with the central nervure conspicuous; nervures of the membranaceous tip black, and with black arborescent lines in the interstitial spaces: wings dusky, iridescent; nervures black: feet black: thighs pale at base and annulate with pale near the tip: tibia annulate with pale: tarsi second joint pale: tergum deep purple, black impunctured; [312] margin brownish cinereous, punctured, varied with transverse 1825.]

abbreviated black lines placed triangularly, and pale : venter pale, pruinous, with dusky points : stigmata each composed of three distinct black points placed obliquely : pectus and pospectus pale, dusky each side.

Length less than three-fifths of an inch.

A common species, and seems to approach *Halys annulata* Fabr., but it does not, in all respects, agree with the description of that species.

2. *P. OLANDA*.—Pale yellowish ; thorax with two spots, hemelytra and scutel with a line, black.

Inhabits Missouri.

Head densely punctured, rufous, blackish at base : antennæ rufous, blackish at tip : thorax pale yellow, with two large transverse brown spots, posterior margin brown ; posterior angles not prominent : scutel pale yellow, with a broad brown line, bifid before, hemelytra pale yellow on the basal portion with a brown line and inner edge ; tip blackish : beneath pale yellow : feet rufous : tibiæ with a yellowish annulus : venter with two series of black spots, and on each side a brown vitta ; ultimate segment with only three spots.

Length two-fifths of an inch.

Var. a. Spots and lines of the upper surface, black ; venter with six series of black spots.

Var. b. Sanguineous ; head, two spots. and posterior margin of the thorax, disk of the scutel, hemelytra, pectus and feet, black ; venter with six series of black spots.

Var. c. Sanguineous ; head, two spots and posterior margin of the thorax, disk of the scutel, hemelytra, pectus and feet, black ; venter black on the disk.

A handsome species, subject to much variation.

3. *P. EXAPTA*.—Sanguineous ; thorax with a black line ; scutel black with a yellow margin.

Inhabits Missouri.

Head at base and antennæ, black : thorax with a transverse black line before the middle ; posterior angles rounded, not prominent : scutel black, with a yellow margin, excepting at base : tergum blackish, with a rufous margin : hemelytra black, exterior

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basal margin yellow : pectus more or less varied with black : tibiæ black.

Length about a quarter of an inch.

4. *P. PUNCTIPES*.—Pale olivaceous; thorax bilineate transversely with white; scutel black, with a white margin.

Inhabits the United States.

Head black : antennæ pale at base, and somewhat biannulate with whitish : proboscis white : thorax blackish before ; a slender, transverse, abbreviated white line on the anterior submargin ; anterior and lateral edges white, the former abbreviated ; posterior angles rounded, not prominent : scutel, lateral and terminal narrow margins [314] white : hemelytra with the exterior basal narrow margin whitish : tergum black : beneath blackish-cupreous : feet white, with black points ; venter, margined with white.

Length from one-fifth to one-fourth of an inch.

A common species, inhabiting almost all parts of the Union, and may be frequently observed on the mullein.

5. *P. PUNCTIPES*.—Greenish-yellow, punctured ; thorax with prominent angles each side, behind ; membranaceous tip of the hemelytra with brown dots ; feet with black points.

Inhabits the United States.

Body greenish-yellow, punctured : clypeus slightly biemarginate at tip, small spot above the eyes impunctured : antennæ pale, penultimate joint at tip and ultimate one black : rostellum nearly attaining the base of the posterior feet, with a longitudinal black line and tip : thorax, anterior lateral edge dentate ; teeth minute, subequal ; behind the middle each side extending into a prominent, subacute angle : scutel destitute of elevated lines, rather paler at tip : hemelytra upon the membranaceous tip punctured with brown, punctures orbicular, numerous : wings whitish, iridescent ; brachial nervure fuscous, black towards the base, feet with numerous black points : tergum deep black, margin greenish-yellow, with geminate, black, dilated lines, which unite with the color of the disk, but do not attain the edge. [315]

Length half an inch.

Not uncommon in Missouri and in Pennsylvania, and resembles *P. ictericus* Fabr.

[The specific name has been inadvertently repeated.—LEO.]
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6. *P. FACETA*.—Green with a pale fulvous margin and longitudinal line.

Inhabits Missouri.

Body oval, green : head entire before : antennæ, excepting the first joint, dusky : thorax with a pale fulvous lateral margin and fulvous edge ; a longitudinal pale fulvous line in the middle ; posterior angles rounded, not prominent : scutel not abruptly contracted in any part, with a longitudinal pale fulvous line on the middle : hemelytra with a pale fulvous lateral margin and deep fulvous edge : tergum blackish, with a fulvous margin.

Length nine-twentieths of an inch.

CYDNUS Fabr.

1. *C. BILINEATUS*.—Black, polished, with sparse lateral hairs ; tarsi dull testaceous.

Inhabits the United States.

Body deep black, polished : head with two longitudinal, parallel, approximate, indented lines, abbreviated at the vertex, the intermediate space somewhat resembling a carina ; lateral margin with sparse black hairs : clypeus subentire, or obsoletely emarginate at tip : antennæ and rostellum piceous : thorax a little narrowed before by a slightly arcuated lateral edge : lateral margin [316] sparsely hirsute ; an indented transverse line on the middle : posterior margin somewhat convex, edge slightly arcuated : scutel large, remotely punctured : hemelytra densely coriaceous at base, membranaceous tip white or pale brownish : wings pale : feet spinous, piceous-black : anterior tibiæ compressed, ciliated with spines : posterior pairs irregularly spinous : tarsi dark testaceous.

Length from three-tenths to two-fifths of an inch.

Not uncommon in Pennsylvania as well as in Missouri.

[Belongs to *Æthus* Dallas.—UHLER.]

2. *C. SPINIFRONS*.—Dark reddish-brown : clypeus ciliate with spines ; anterior thighs with an oblique, linear, emarginate spine.

Inhabits Missouri.

Body dark reddish-brown, punctured : clypeus armed on the edge with erect, equidistant, prominent spines : antennæ pale reddish-brown, second joint minute : thorax with dilated punctures, obsolete on the anterior disk, a transverse indented line

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on the middle, lateral edge with a few hairs : scutel nearly as long as the thorax, punctures dilated, tip acute : hemelytra reddish-brown, punctures approximate, membranaceous tip white : feet pale reddish-brown : anterior thighs with an oblique, robust, linear, emarginate process near the middle beneath, and a small, robust spine near the tip ; tibiæ with prominent rigid spines on the exterior edge : intermediate thighs mutic, tibiæ armed with [317] moveable spines : posterior thighs with a slightly flexuose spine near the tip beneath, and two or three small tubercles at tip ; tibiæ armed with a few moveable spines : postpectus blackish.

Length three-twentieths of an inch.

Found near Engineer Cantonment, common.

[Belongs to *Amnestus* Dallas.—UHLER.]

COREUS Fabr.

1. C. *ALTERNATUS*.—Fuscous ; thighs spinous beneath ; margin of the abdomen black, with five white lineolar spots ; head mutic.

Inhabits Missouri Territory.

Body deep blackish-brown : eyes rufous, a moveable black pupil : stemmata sanguineous : antennæ blackish, robust, two terminal joints rufous, equal : rostellum pale, tip black : thorax punctured, gradually elevated behind, attenuated before, anterior termination as wide as the base of the head, anterior lateral edge slightly dentate, posterior angles rounded : scutel of the male tinged with rufous : hemelytra tinged with rufous, punctured : feet black : tarsi rufous : thighs, a double series of hardly prominent, robust spines beneath, of which the two opposite terminal ones are much more prominent, distinct, and acute : abdomen, margin black, alternating, with five, oblique, white lines : tergum, disk sanguineous : male, posterior thighs much dilated, very robust, slightly tuberculat above, terminal spines not more prominent than the [318] others, a large prominent spine on the inferior middle : posterior tibiæ dentate towards the tip, refracted in the middle, and with a robust, prominent acute spine on the angle.

Length of the male more than four-fifths of an inch ; female nearly three quarters.

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Somewhat similar to *C. galeatus* Fabr., but is considerably larger, the head is unarmed, and in other respects sufficiently distinct. It belongs to the genus *Mictis* of Leach.

2. *C. ORDINATUS*.—Head fulvous, with two black lines; thorax with the lateral edges fulvous.

Inhabits the United States.

Head dull fulvous, with two broad, black, longitudinal lines: antennæ fuscous: thorax dull fulvous, with numerous, irregularly disposed black punctures, lateral narrow margin fulvous, and with an obsolete interrupted or abbreviated dull fulvous line in the middle; posterior angles rounded, not prominent; posterior margin a little depressed: scutell colored and punctured like the thorax: hemelytra also dull fulvous, with numerous black punctures irregularly disposed; membranaceous portion black: tergum on the lateral margin black, the segments fulvous at base: beneath pale fulvous, with a few black punctures: feet with numerous black points.

Length three-fifths of an inch.

This is one of the most common of our species: when taken it diffuses an odor which has been [319] compared to that of a ripe pear. I have found it in Pennsylvania, Missouri, and Florida.

3. *C. ARMIGERUS* [ARMIGER].—Brown, feet white, spotted with black: head spinous above the antennæ; margin of the tergum black, with five white lineolar spots.

Inhabits Missouri Territory.

Body brown above, beneath pale: eyes prominent, rufous: stemmata sanguineous; above the origin of each antenna, an elevated, prominent, acute spine, half as long as the basal joint of the antenna: antennæ, first joint white, spotted with black, second and third black, white at base and tip, terminal joint rufous: thorax punctured, elevated behind, descending almost vertically and attenuating to the head; anterior lateral edge dentate, posterior angles dilated and terminated in an angle, from whence the posterior margin descends sinuously and obliquely, terminating in a short acute spine each side of the base: base transversely rectilinear: scutell with three black spots at base: hemelytra, a white oblique line in the middle on the mem-

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branaceous portion; tip blackish: feet white, spotted with black; thighs armed at the tip beneath, with two short acute spines: tergum sanguineous, base, tip, and margin black, the latter with five white oblique lines: venter pale, spotted with black.

Length of the female eleven-twentieths of an inch. [320]

I have not yet seen the male of this species, it bears a general resemblance to *C. galeatus* Fabr. and is about equal to that species in magnitude, but it may be at once distinguished by the white transverse line at the base of the membranaceous portion of the hemelytra.

4. *C. LATERALIS*.—Pale reddish-brown, punctured: hemelytra with spotted nervures; feet pale, spotted.

Inhabits the United States.

Body somewhat hairy, pale reddish-brown, with much dilated approximate punctures: head somewhat unequal, two obsolete impressed lines between the antennæ, a blackish spot behind the eye: eyes dusky, pale before: antennæ brownish, with sparse hairs; terminal joint as long as the preceding one, dilated, with cinereous pubescence: thorax with three obsolete dusky spots before, and an impunctured whitish line abbreviated before; scutellum with a longitudinal, impunctured whitish line: hemelytra, nervures with black spots, interstitial spaces membranaceous; membranaceous tip immaculate, whitish: beneath with a distinct lateral red line; feet hairy, pale; thighs spotted with reddish-brown; pectus rufous: venter yellowish or rufous.

Length more than a quarter of an inch.

Found near Engineer Cantonment, and is not uncommon in Pennsylvania. [321]

LYGÆUS Fabr. Latr.

1. *L. RECLIVATUS*.—Black, spot on the vertex, three on the thorax and reclivate line on the hemelytra, red; a geminate white spot near the hemelytra.

Inhabits Missouri.

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, inner spot not attaining the base, outer 1825.]

spot marginal extending from near the middle of the edge, to the posterior angle, and separated from the intermediate spot by a small velvet black one: scutellum a little elevated on the basal disk: hemelytra with a rufous, somewhat reclinate line from the humeral angle to the tip of the coriaceous portion, a velvet black spot on the middle, and a minute one at the inner basal angle; membranaceous 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 rather more than two-fifths of an inch.

Resembles *L. turcicus* Fabr., but is at once distinguishable by the large white spot on the membranaceous moiety of the hemelytra, which is precisely [322] similar to that on the corresponding portion of the hemelytra of *L. punctum* Fabr.

3. *L. TRIVITTATUS*.—Black, thorax trilineate, and hemelytra marginate with rufous.

Inhabits Missouri.

Body black: eyes and stemmata sanguineous: thorax mutic; two indented transverse lines near the head, of which the anterior one is curved in the middle; three bright rufous lines, of which two are marginal; posterior edge obscurely rufous: hemelytra, coriaceous portion with a rufous exterior and posterior margin, membranaceous tip immaculate: trochanters rufous: tergum rufous with three lateral black punctures: venter, margin and middle rufous.

Length nine-twentieths of an inch.

Taken at Engineer Cantonment.

3. *L. BICRUCIS*.—Red; head, feet, anterior part of the thorax and tips of the hemelytra, black; inner edges of the hemelytra forming a yellow cruciate mark.

Inhabits the United States.

Body red: head black: stemmata remote, inserted near the eyes; projections for the reception of the haustellum, whitish: thorax mutic, posterior angles rounded, not salient, a large transversely oblong-quadrate, black spot before the middle, not attaining the anterior or lateral edges, partially interrupted in its middle by a reddish [323] subcruciate line; posterior edge yellow-

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ish; scutel black, an indented, large, triangular, paler spot each side on the disk: hemelytra, membranaceous tip black with a whitish edge; coriaceous portion red with a lineolar 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.

Sometimes occurs in Missouri; I have also received a specimen from Mr. A. G. Oemler, of Savannah, Georgia.

4. *L. 5-SPINOSUS*.—Obscure rufous: posterior thighs five-spined; tergum red, margin lineate with black.

Inhabits the United States.

Body dull rufous, minutely and densely punctured: head triangular: stemmata sanguineous: antennæ, second and third joints black at their extreme tip, fourth joint dusky, pale at base: rostellum pale, black at tip; setæ black: thorax obsoletely indented longitudinally in the middle and transversely before the middle; posterior angles salient, acute, blackish at tip: scutel pale at tip: feet pale rufous, whitish at base: posterior thighs more robust, rufous at tip, five-spined beneath: pectus, postpectus and head beneath, black in the [324] middle: tergum red: margin with about four pale spots, and black lineolar edges to its segments.

Length of the body more than half an inch.

5. *L. EURINUS*.—Blackish, hairy, punctured; tergum black, disk rufous, margin with four yellowish spots; posterior thighs three-spined.

Inhabits Missouri and Arkansas.

Body blackish, hairy, punctured: head triangular: eyes prominent: antennæ, second and third joints dull testaceous, blackish at their tips: thorax densely punctured, mutic: hemelytra black-brown: feet black: tibiæ and first joint of the tarsi, dull testaceous, with black tips: posterior thighs three-spined beneath, and one or two smaller spines at tip: abdomen, reflexed margin with four yellowish spots: tergum rufous on the basal disk.

Length about half an inch.

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The body of this insect as well as the preceding, is long and narrow, the diameter of the head which passes through the eyes is but little shorter than the breadth of the thorax.

ACANTHIA Latr.

A. INTERSTITIALIS.—Black, hemelytra with a few whitish spots, tip whitish with black nervures and spots.

Inhabits Missouri.

Body leaping, black-brown, with short yellowish hairs: eyes large, deep castaneous, whitish at [325] the anterior base: stemmata reddish-yellow: clypeus and labrum whitish: hemelytra deep black, with distant, very short yellowish hairs at base, four or five hyaline whitish spots on each hemelytron; middle of the tip of the coriaceous portion hyaline, membranaceous tip hyaline, nervures deep black, with a blackish oblong-quadrangle spot between each pair; margin dusky, with a black spot at the exterior tip: feet pale before and black behind: tibia somewhat annulate: wings white.

Length more than three-twentieths of an inch.

Not uncommon on the shore of the Missouri river, skipping nimbly about.

TINGIS.

T. OBLONGA.—Head with three elongated acute spines; nervures brown; exterior margin of the hemelytra white.

Inhabits Missouri.

Body elongate, narrow, whitish: head with three elongate, linear acute spines, of which two are above the antennæ, and one between them: eyes black: antennæ testaceous, terminal joint blackish: thorax and scutellum conjunctly, black in the middle; three elevated white lines and reflected margin; a much elevated, acute crest at the anterior termination of the intermediate line: hemelytra, a double slightly elevated line, confluent at tip and at base, and including a small blackish dot; [326] nervures of the tip and inner margin black-brown; exterior margin white immaculate: pectus, postpectus and venter black: feet pale testaceous.

Length nearly one-eighth of an inch.

ARADUS Fabr.

A. QUADRILINEATUS.—Brown; antennæ robust; clypeus bifid; thorax quadrilineate, edges irregularly and minutely dentate.

Inhabits Missouri.

Body dull light-brown, opaque: head with two longitudinal indented lines, and two small indented black spots between the eyes: clypeus trifid at tip, intermediate division longest, obtuse at tip, exterior divisions acute at tip, hardly attaining the base of the second joint of the antennæ: eyes very prominent: antennæ robust, two terminal joints darker, ultimate one shorter and less dilated than the preceding one: thorax transversely oblong-oval; four elevated, parallel, equidistant, longitudinal lines, and a lateral, abbreviated one; lateral edge slightly reflexed and dentate, with numerous minute, irregular teeth: scutellum large, impressed each side of the middle, and near the tip: hemelytra minutely dentate on the exterior basal edge: feet dusky, pale near the incisures.

Length rather more than a quarter of an inch. [327]

REDUVIUS Fabr.

1. R. RAPTORIUS.—Obscure brownish; head, thorax, and anterior feet, spinous, the latter raptatory.

Inhabits the United States.

Body oblong, obscure brownish: head contracted above the eyes, spinous; six larger spines before the contraction, placed two and two, and two or four larger ones behind the contraction: stigmata sanguineous: eyes inserted in the lateral middle of the head: antennæ inserted near the tip of the clypeus, with dilated annuli of dull rufous and pale: rostrum slightly arcuated, pale: thorax contracted in the middle, obsolete canaliculate, with short, numerous, obtuse spines before the contraction, and dense granuli behind it; posterior angles hardly prominent: feet somewhat pale, subannulate, granulated; anterior pair raptatory; thighs unequal, anterior pair robust, villous, dusky, armed with an erect, prominent, obtuse spine near the tip above, and a double series of ten equal, equidistant, acute spines beneath; anterior tibiae with a double series of six similar spines on the inner side: tergum rufous on the disk, margin varied with black and pale: 1825.]

hemelytra, membranaceous tip with a longitudinal reddish-brown line.

Length more than nine-twentieths of an inch. [328]

Observed to be not uncommon in Missouri, as well as in Pennsylvania.

2. *R. SPISSIPES*.—Thorax and hemelytra light reddish-brown, edged behind with white; venter black, incisures whitish; feet thick.

Inhabits Arkansa.

Head black, posterior lobe with two tubercles: thorax light reddish-brown; anterior lobe with dilated, black, oblique, or arcuated lines, of which some are confluent; posterior lobe hardly more elevated than the preceding, with a black posterior submargin and a white posterior margin: scutel black, margined with white, and tipped by a few hairs: hemelytra, coriaceous portion light reddish-brown, with a narrow whitish posterior margin, membranaceous portion black or dark fuscous: feet thickened, black, hairy: coxæ bright red: abdomen black, margin and band on each segment, white.

Length thirteen-twentieths of an inch.

The feet resembles those of *R. crassipes* Fabr., but it is a very distinct species.

CORIXA Geoff.

1. *C. INTERRUPTA*.—With black and yellowish transverse lineations; feet pale; face pale green.

Inhabits Missouri.

Head pale green: eyes large, triangular, reddish-brown: thorax transversely lineated with about twenty-two blackish and pale yellowish, equal, [329] alternate lines: hemelytra rounded at tip, with alternate, numerous, abbreviated, transverse, blackish, and interrupted, pale yellowish lines; lines near the tip much undulated and irregular; margin with about four obsolete blackish spots, which appear to be still more faintly prolonged into fasciæ: epipleura pale, destitute of the transverse lines, but the obsolete spots are visible upon it; edge blackish: wings white: feet pale: tergum black, margin pale: pectus and postpectus testaceous; a large black spot between the anterior pairs of feet.

Length of the body half an inch.

This species equals *C. Geoffroyi* Leach, in length, but is less robust.

2. *C. ALTERNATA*.—With black and pale transverse lineations; face and feet pale whitish; beneath black.

Inhabits Missouri.

Head pale greenish-white: eyes triangular, large, reddish-brown, dark: thorax black, with about eight transverse, pale, equal lines: elytra with very numerous, alternate, interrupted, black and pale yellowish lines, which become more irregular and undulated towards the tip: wings white: epipleura pale, immaculate, edge blackish: feet whitish: pectus and postpectus black: tergum black, with a white margin: venter black, with a pale margin and terminal incisures.

Length a quarter of an inch.

[330]

Very much resembles the preceding, but is much smaller, darker, and the prevailing color beneath is black.

CICADA Oliv. Latr.

1. *C. PRUINOSA*.—Body above varied with greenish and black, beneath pruinose: abdomen with a white spot each side, at base, one at the middle margin and another near the marginal tip.

Inhabits the United States.

Wings, nervures of the hemelytra green to the middle, inner edge of the costal nervure brownish, nervures beyond the middle brownish: anterior thighs varied with dusky; anterior pairs of legs dusky at the exterior tip: tarsi varied with dusky: tergum black: segments destitute of differently colored posterior margins, basal segment with a white pruinose spot each side of the back, another transversely elongated and attenuated one on the lateral base of the third segment, and another upon the lateral base of the caudal segment: venter dusky in the middle: caudal segments beneath testaceous, dusky near the middle tip.

Length two inches, to the tip of the hemelytra.

Found on the Missouri; it is also very common in Pennsylvania, and much resembles *C. tibicen* of Fabr., but it differs in being pruinose beneath, and in having white abdominal spots.

2. *C. MARGINATA*.—Body above varied with [331] greenish 1825.]

and black, beneath pruinose; tergum black, the segments with yellowish posterior margins.

Inhabits Missouri.

Head and thorax greenish-yellow, slightly varied with black: scutellum black, with the W and elevated α greenish-yellow: hemelytra with the nervures as far as the middle, green, beyond the middle, brown: tergum black, the segments yellowish-brown on their posterior margins; all beneath testaceous, covered with a mealy white.

Length more than two inches and a quarter to the tip of the hemelytra.

Differs from the preceding by being larger, by having the abdominal segments margined, and by being destitute of the white spots on the tergum. The basal spine of the anterior thighs is much more oblique than in the preceding species. This cannot be the *costalis*, if the descriptions of that species are correct.

3. C. DORSATA.—Scutellum varied with blackish, greenish-yellow and white; tergum black, a dorsal and lateral line of white spots.

Inhabits Missouri.

Head and thorax varied with greenish-yellow and black: scutellum blackish-chestnut, the W and α marks greenish-yellow, lateral lines of the W white near the thorax, a white line from the humerus is interrupted by the anterior lines of the α , and also in the middle between these two lines, a white [332] spot between the two lateral lines of the α : tergum black, a dorsal line of white spots and a marginal line of white spots which are continued over the terminal segment, the lateral spot of the first and second segments is very much dilated and confluent, that of the third segment is much elongated and attenuated towards the back, a white oblique spot on the first segment each side of the dorsal line; all these white marks are pruinose.

Length two inches to the tip of the hemelytra.

Found in the prairie near the Konza village, in which vicinity it is rather common. Its note is harsher than that of our *pruinosa*, and is generally uttered when the animal rises in flight, alarmed on the approach of the traveller.

4. C. AURIFERA.—Body covered with short golden pubescence; beneath hairy.

Inhabits Missouri.

The nervures of the hemelytra are yellowish to the penultimate anastomosis, beyond which they are brown; the two particular anastomoses are strongly marked with blackish: head testaceous: thorax but little varied with black: scutel black, with the usual testaceous lines: tergum black, densely covered with the golden hair: beneath pruinose.

Length one inch and a half nearly, to the tip of the hemelytra.

This species differs from the preceding in being [333] smaller, and in having the golden pubescence, which is more dense on the head and thorax.

Found near the Konza village.

5. *C. PARVULA*.—Anterior thighs with three parallel, subequidistant spines.

Inhabits Missouri.

Body dull testaceous: head with a dilated dusky line each side on the front: stemmata reddish-yellow: antennæ rather large, longer than the head: labrum with dusky rugæ and a longitudinal impressed line, abbreviated at the termination of the rugæ: thorax indistinctly varied with black, the lateral edge not prominent: scutel quadrilineate, lines dilated, abbreviated, intermediate ones very short, terminal α hardly elevated: hemelytra, with a reddish-yellow reflection: nervures blackish beyond the middle; costal nervure very conspicuously so; no marginated anastomosis; segments of the tergum dusky at base: thighs and trochanters varied with black: anterior thighs tridentate; teeth prominent, subequidistant, parallel, posterior one longest, anterior one shortest.

Length to the tip of the hemelytra seven-tenths of an inch.

A very small species. I have a specimen from near the Rocky Mountains, which is entirely green, it is a female, and probably of the same species with the above. Its length to the tip of the hemelytra, is four-fifths of an inch. [334]

6. *C. SYNODICA*.—Black, varied with pale testaceous; tergum annulate.

Inhabits the base of the Rocky Mountains.

Body above, black, varied with pale testaceous: head with a transverse line before the eyes, and about three triangular spots 1825.]

at base, testaceous: clypeus above destitute of grooves: thorax sinuous behind, the posterior transverse impressed line placed very near the posterior edge; posterior angles prominent, rounded, lateral edge obtusely emarginate before the posterior angles; margin, two oblique lateral lines and a longitudinal dorsal one testaceous: scutel with a lateral marginal line, the elevated α and two dorsal dilated lines, testaceous; the dorsal lines are merely emarginate on the inner side, and do not form the W; at the tip of each anterior line of the α is a conspicuous, black, impressed puncture, and behind the α the posterior edge of the scutel is visible and testaceous: beneath, very pale testaceous; rostrum black each side of the grooved base, in the middle and at tip: feet lineated with black; anterior thighs bispinous: tergum with narrow posterior reddish-brown margins; terminal and anal segments testaceous, the latter with two black spots: nervures of the wings testaceous, beyond the middle fuscous.

Length to the tip of the hemelytra less than one inch.

Dr. James and Mr. Peale observed this species in great numbers in one locality, at the base of [335] the Rocky Mountains: but it did not occur elsewhere.

FULGORA.

F. SULCIPES.—Thorax with a few black punctures; nervures of the hemelytra margined with black; thighs with black grooves.

Body pale: head yellowish-green: rostrum elongated, as long as the head and thorax, with an elevated line and edges, two black points between the eyes, beneath between the eyes three lines and edges elevated: thorax with a large black spot behind each eye, and several distant black points, two conspicuous black points between the larger ones: hemelytra with pale nervures, which are margined with black: feet with black grooves; anterior and intermediate tibiae with an annulus and tip and tarsi black; posterior tibiae seven-spined, besides the terminal spinous semifascia.

Length to the tip of the hemelytra more than three-tenths of an inch.

A small species which I do not suppose to possess the power of yielding light. It inhabits the Arkansa near the Rocky Mountains.

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FLATA Fabr.

1. *F. BIVITTATA*.—Greenish-yellow; a lateral reddish-brown line confluent on the hemelytra; hemelytra vertical. [336]

Inhabits the United States.

Body pale green: head dusky, brownish before: eyes red: antennæ and stemmata yellowish-white; seta black: thorax and scutel glabrous, with a broad, lateral, dark reddish-brown vitta: hemelytra vertical, much dilated, pale greenish-yellow, paler towards the costal margin, inner margin dark reddish-brown: wings white: pectus and caudal segments whitish: feet, anterior pairs brownish: venter pale green.

Length three-tenths of an inch.

Found near Engineer Cantonment on the Missouri river; it also occurs in Pennsylvania; it is rather smaller than *F. relicta* Fabr., and the hemelytra are more dilated.

2. *F. STIGMATA*.—Black; wings white, with a black stigma and transverse spot at base.

Inhabits Missouri.

Body black: vertex triangular, distinguished by an elevated edge, and an abbreviated, carinate line: thorax acutely emarginate behind, and with an elevated edge and dorsal carina, carina abbreviated before, a squamula covering the origin of the hemelytra: scutel tricarinate, intermediate carina abbreviated behind: hemelytra white, a common black band near the base, becoming brown towards the suture, a black stigma, which is margined before with white: nervures with white and blackish alternate dots, the latter setigerous: tibiæ pale brownish. [337]

Length a quarter of an inch nearly.

Very numerous at Engineer Cantonment on the Missouri.

DELPHAX Fabr.

D. *TRICARINATA*.—Whitish; thorax yellowish; hemelytra with two oblique bands and spot; nervures spotted.

Inhabits Missouri.

Body whitish: head above, pale green: eyes deep brown, profoundly emarginate beneath: antennæ brown, longer than the head, second joint rather longer than the first: seta longer than 1825.]

the antennæ: front brown, deeply impressed with the grooves of the rostrum, presenting three prominent carinæ: rostrum with a fuscous band on the middle, and spot near the tip: thorax yellowish: hemelytra white, an obsolete band at base; an oblique distinct one on the middle united to a curved one beyond the middle, which attains the tip and incloses a linear oblique spot near the tip of the costal margin: feet spotted with fuscous: abdomen pale yellowish: tergum blackish in the middle.

Length of the body and wings three-twentieths of an inch.

Came on board of our boat as we ascended the Missouri, in considerable numbers on the third of July. The hemelytral fascia, may, on many specimens, be traced into the form of the letter W, [338] the oblique spot being included between the posterior curve of the letter and the costal margin.

CERCOPIS Fabr.

1. *C. QUADRANGULARIS*.—Brownish-cinereous; elytra with two oblique brown bands confluent at the outer margin: beneath black; feet annulate with pale.

Inhabits Missouri.

Body brownish-cinereous, covered with dense, minute hairs: head obsoletely spotted: eyes fuscous, a pale longitudinal line on the middle, in which is a brown central line: stemmata indistinct, black: thorax emarginate at the anterior angles for the reception of the eyes, and deeply emarginate behind for the reception of the scutel; a double series of obsolete, indented spots before: scutel, tip and basal angles acute: hemelytra pale brownish-cinereous; an oblique black-brown fascia from the inner basal angle, is confluent at the middle of the exterior margin, with an oblique fascia which terminates near the sutural tip; tip with a small blackish curve; region of the humerus dusky; beneath black: feet black: thighs annulate with pale; posterior pair of tibiæ pale, armed with two robust spines behind, and numerous small ones at tip; posterior tarsi armed with spinules at the tips of the first and second joints beneath: abdomen black; tail pale beneath. [339]

Length more than three-tenths of an inch.

2. *C. OBTUSA*.—Head and anterior part of the thorax pale,
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with three transverse lines: wings varied with brown and pale.

Inhabits the United States.

Body short, oval: head pale yellowish, an elevated, reddish-brown, transverse line between the eyes, and before the stemmata: front with about nine parallel, equidistant, reddish-brown lines which are interrupted in the middle, and abbreviated at the cavity of the antennæ: antennæ placed in a deep cavity, beyond which the seta only projects; head beneath black: thorax pale yellowish before, reddish-brown and rugose with continuous lines behind, anterior edge elevated, reddish-brown; a reddish-brown transverse band on the middle: scutell pale reddish-brown: hemelytra varied with fuscous and pale, generally forming a band on the middle, which is more distinct on the costal margin, spot at tip and larger one at base; nervures dark brown: feet black, joints whitish: tibia and tarsi whitish: posterior tibiæ bispinous behind, of which one is very robust.

Length rather more than one-fifth of an inch.

Female, colors generally paler, with the pectus and abdomen whitish.

Very common near Council Bluff, and is also found in Pennsylvania. The band of the hemelytra is sometimes indistinct or wanting, and there are three brown dots near the tip. [340]

TETTIGONIA Oliv. Lam. Latr.

1. T. 8-LINEATA.—Pale greenish-white, lineate with rosaceous; nervures of the hemelytra rosaceous.

Inhabits Missouri.

Body pale greenish-white: head quadrilineate with rosaceous, the two intermediate lines double before the stemmata, and with an obsolete spot behind them: stemmata rosaceous: eyes a darker red: thorax minutely rugulose transversely; six or eight rosaceous lines, the two lateral ones dilated, submarginal: scutell transversely rugulose, four rosaceous lines: hemelytra with the nervures and costal margin rosaceous; wings, nervures rosaceous; tibiæ rosaceous, spines of the posterior pair white.

Length rather more than seven-twentieths of an inch. A male.

Var. a. Rather larger; color pale greenish; those parts which are rosaceous in others, are yellowish in this variety.

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Near Engineer Cantonment on the Missouri.

T. LIMBATA.—Body deep black ; side edged with white.

Inhabits Missouri.

Body deep black, punctured : a white lateral line from the eye to the tail : head before and beneath with minute white points : eyes whitish beneath : thorax with a transverse series of four [341] larger impressed punctures, the exterior ones with a rufous spot, and resembling stigmata ; a white lateral line interrupted by a yellow spot over the interval between the two anterior pairs of feet : scutellum impunctured, two rather large impressed dots, and a transverse impressed line on the middle ; posterior portion transversely rugulose : hemelytra with large distinct, impressed punctures : wings whitish ; nervures and base black : feet, spines of the posterior tibiae not very prominent or rigid.

Length more than a quarter of an inch.

Near Engineer Cantonment on the Missouri.

8. *T. MIXTA*.—Dull blackish-brown ; elytra with obsolete minute pale punctures ; tergum deep black ; feet annulate with pale spots.

Inhabits Missouri.

Head rugose, the lines somewhat longitudinal : stigmata rufous, placed on the anterior margin ; first joint of the antennae pale at tip : labrum irrorate with pale, and two larger spots at base : thorax transversely rugose and with an anterior series of punctures, lateral edge behind the eye white : hemelytra densely rugose, with a few pale, minute spots on the nervures, and rather larger ones on the inner and terminal margin ; two abbreviated whitish lines on the humeral origin of the nervures ; (when viewed towards the light, the whole wing is irrorate with pale hyaline points :) wings blackish, emarginate at tip ; nervures fuscous : [342] tergum deep black, edge of the segments piceous : pectus deep black, segments generally edged with whitish : feet, anterior pairs annulate near the tip of the thighs with whitish spots ; tibiae with two or three whitish spots ; posterior pair of feet paler beneath : venter irrorate with pale points, lateral segments with a longitudinal pale line on each, and pale inferior edge ; caudal segment with large, dense, pale spots.

Length less than three-tenths of an inch.

4. *T. OBLIQUA*.—Body yellowish-white, with two sanguineous lines, connivent upon the head and scutel; hemelytra white, with two sanguineous lines.

Inhabits the United States.

Body pale yellowish-white: head with two dilated sanguineous lines, connivent before: antennæ, setæ as long as the head and thorax, dusky: thorax with two sanguineous lines: scutel with two lines and tip sanguineous: hemelytra whitish, an oblique line from the base slightly refracted on the thinner margin, and terminating behind the middle of the margin; an oblique longitudinal line on the disk, a more abbreviated, obsolete, subcostal line, and a costal line from the base to the middle of the edge, sanguineous: feet whitish: tail rosaceous.

Length rather more than one-tenth of an inch.

Found at Engineer Cantonment, and is also common in Pennsylvania. [343]

5. *T. COMES*.—Pale yellowish, with sanguineous spots.

Inhabits Missouri.

Body pale yellowish: head, a transverse sanguineous line, profoundly arcuated in the middle, and a smaller transverse spot before: eyes fuscous: thorax with three sanguineous spots, the lateral ones smaller, and the intermediate one arcuated: scutel, a sanguineous spot at tip: hemelytra yellowish-white, spotted with sanguineous; spots arranged two at base of which the outer one is small, and the inner one elongated and abruptly dilated on the inner side at tip; two upon the middle, of which the outer one is elongated in a very oblique line; two behind the middle, of which the inner one is obliquely elongated, and the outer one smaller, and interrupted; and a transverse linear one near the tip, ramose upon the nervures: feet whitish.

Length to the tip of the hemelytra, one-ninth of an inch.

The line and spot on the head and the spots of the thorax are sometimes obsolete, but always visible, and the latter are sometimes connected by curving towards the anterior edge of the thorax. The spots of the hemelytra are also sometimes slightly interrupted, or connected into four oblique bands.

6. *T. TRIFASCIATA*.—Pale yellowish-white; elytra [344] irrorate with reddish and somewhat trifasciate with dusky.

Inhabits Missouri.

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Body pale yellowish-white: head with two or three obsolete dull sanguineous spots on the vertex in the form of curves or circles: eyes dusky: thorax, a sanguineous line abbreviated before, and an obsolete curve at the anterior angle: hemelytra whitish, irrorate with sanguineous; a dilated, brownish, interrupted, subbasal band; an obsolete interrupted band behind the middle, upon the posterior costal termination of which is an abbreviated sanguineous line, and an oblique blackish band near the tip; a large quadrate white immaculate spot on the middle of the costal margin; humeral base white, immaculate: tergum dusky at base: feet white.

Length to the tip of the hemelytra one-eighth of an inch.

The spots of the head and thorax are sometimes hardly discernible, and the intermediate band is often so faint and interrupted as to be overlooked.

7. *T. BASILARIS*.—Pale yellowish, varied with sanguineous; elytra reddish-brown at base.

Inhabits Missouri.

Body pale yellowish: head obsoletely varied with sanguineous: eyes dusky or black: thorax dusky behind: anterior margin with four or five obsolete sanguineous spots: scutellum dusky reddish-brown or sanguineous at tip: hemelytra with a broad band of reddish-brown at base; a spot on the middle of the thinner margin, then an oblique line, and another oblique line towards the tip, sanguineous; at the inner extremity of the latter is a very minute black point.

Length to the tip of the hemelytra, one-ninth of an inch.

[From Jour. Acad. Nat. Sci., Philadelphia, Vol. 5, 1825, pp. 32—47.]

Descriptions of New Species of *HISTER* and *HOLOLEPTA*, inhabiting the United States.

Read May 10, 1825.

HISTER.

Family 1.—Head with a transverse stria; thorax with one or two striae; tibiae dentated.

A. Thorax with two lateral striae, entire or one abbreviated.

† Elytra with the marginal stria.

[Vol. V.]

1. *H. MEMNONIUS*.—Inner thoracic stria abbreviated a little beyond the middle; elytra, each with a basal puncture.

Body black, somewhat polished: head slightly convex, arcuated line very distinct: mandibles a little prominent: antennæ dull piceous: thorax with the inner stria abbreviated at about two-thirds the length of the thorax, a very short impressed line on the middle of the base: elytra with the marginal and four dorsal striæ entire; the fourth hardly reaching the base; fifth less than half the length of the elytrum; sutural stria more than half the length of the elytrum; an obvious impressed puncture at base equidistant from the fourth stria and the scutel: feet piceous: anterior tibiæ quadridentate.

Length nearly one-fifth of an inch.

I received this species from Dr. J. F. Melsheimer, under the name I have adopted. The punctures of [33] the elytra are much nearer to the base than those of the *senegalensis* as represented by Paykull.

[Evidently a distorted specimen of *H. immunis* Er., with the posterior part of the inner thoracic stria deficient. I formerly considered it as *H. interruptus* Beauv., (*obtusatus* Harris,) but that species is much too large.—LEC.]

2. *H. DEPURATOR*.—Inner thoracic stria longer; elytra, marginal stria obsolete; dorsal striæ three.

H. unicolor Melsh. Catal.

Body black, polished; head slightly convex, arcuated line very distinct: mandibles a little prominent: antennæ piceous: thorax with the exterior stria a little shorter than the inner one, which extends to the basal margin: elytra, marginal stria obsolete, consisting only of a series of punctures which extend no further than the middle; dorsal striæ three, entire; fourth stria consisting of from nine to twelve impressed points, not extending beyond the middle; fifth stria very short, obsolete, and consisting of two or three impressed points; sutural stria abbreviated at the middle, generally interrupted at the posterior tip into a short series of punctures: anterior tibiæ tridentate; terminal tooth slightly emarginate; superior tooth often obsolete.

Length rather more than one-fourth of an inch.

Var. a. Marginal line obsoletely continued by the humerus in punctures.

1825.]