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Page(s): Title Page, Page 73, Page 74, Page 75, Page 76, Page 77, Page 78, Page 79, Page 80, Page 81, Page 82, Page 83, Page 84, Page 85, Page 86, Page 87, Page 88

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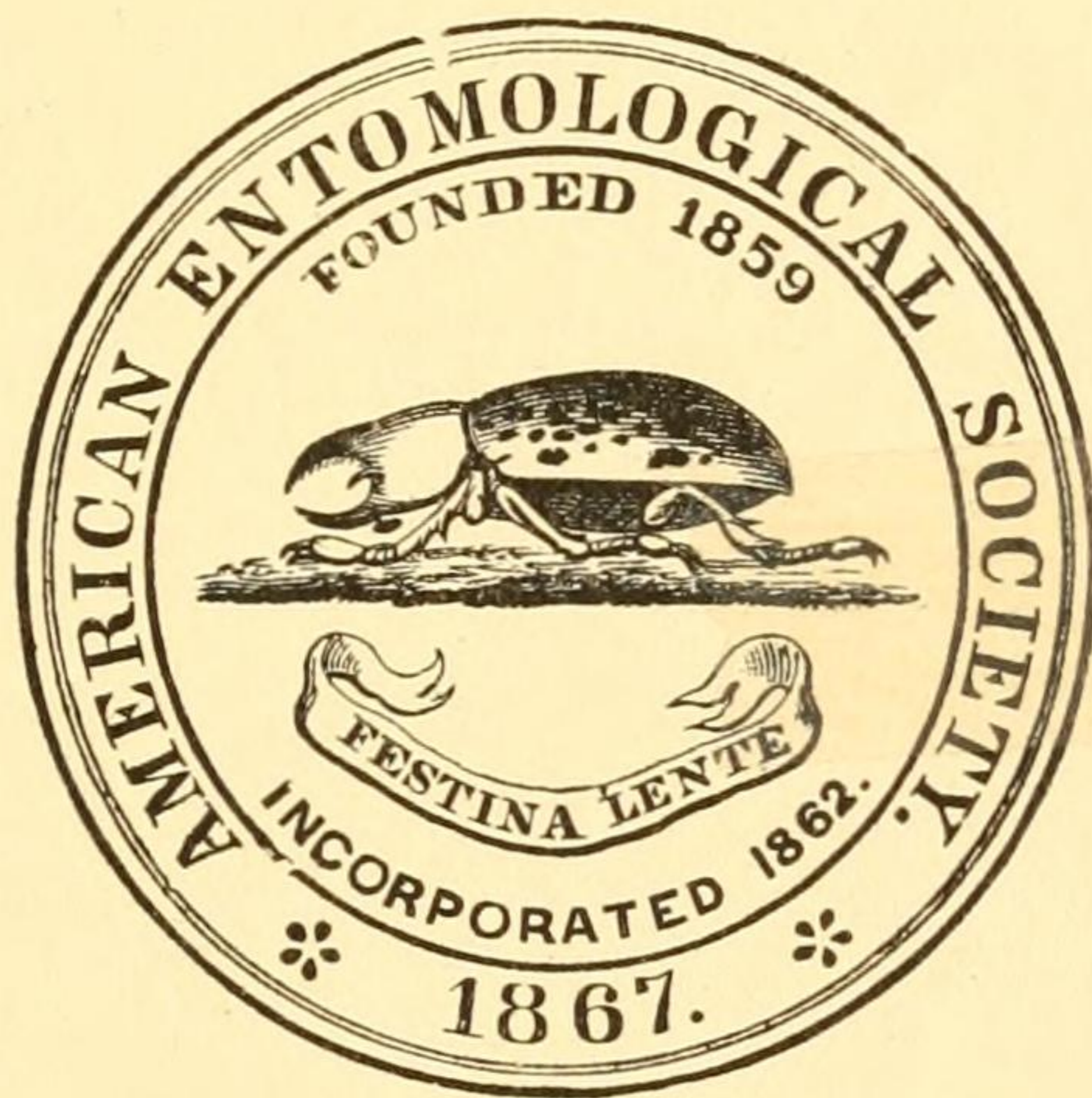
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**DESCRIPTIONS OF SOME NEW OR UNFAMILIAR  
NORTH AMERICAN HEMIPTERA.**

BY EDWARD P. VAN DUZEE.

**NEOPHARNUS** n. gen.

Closely allied to *Pharnus* but differing principally in having the head shorter, the cheeks broader, rounded, approaching and almost contiguous at apex above and beyond the tip of the narrow tylus. Antennæ longer than in *Pharnus*, the joints regularly increasing in length. Bucculæ elevated anteriorly, its angle subacute and a little advanced, posteriorly becoming evanescent opposite the middle of the eye. Rostrum attaining the apex of the third ventral segment, first joint but little surpassing the base of the head. Pronotum broader than in *Pharnus*, the lateral angles produced in a rounded subnodular lobe directed outwardly; latero-anterior margins narrowly foliaceous-expanded and eroded and armed with a few irregular tentacular teeth. Scutellum and elytra as in *Pharnus*. Abdomen broad, the connexivum expanded with the apical angles of the segments prominent. Venter with a broad flat carina in a wide shallow depression. Orifices produced in a straight sulcus which terminates abruptly about half way to the margin of the pectus. Mesosternum and tubercular base of the second ventral segment as in *Pharnus*. Tibiæ sulcate.

This genus differs from *Pharnus* in having the cheeks produced and almost contiguous before the narrow tylus and the margins of the pronotum laciniate. Type *Neopharnus fimbriatus*.

**Neopharnus fimbriatus** n. sp.

Broad oval with much the aspect of *Pharnus inconspicuus* H. S. Whole surface punctate and hairy. Margins of the cheeks deeply sinuated before the eyes then almost parallel to the rounded deeply notched apex of the head; the base of the tylus and a line next each ocellus smooth. Pronotum quite strongly depressed before the middle;



latero-anterior margins irregularly eroded, with about four filamentous teeth, those at the anterior angles reaching to the front of the eyes; callousities and an indistinct sublateral and median vitta smooth or somewhat calloused; the surface posteriorly with irregular transverse rugæ; the nodular humeri narrowly margined. Scutellum uneven and swollen at base; the produced apex with a thickened submargin and short median carina. Connexivum broad, deeply notched, the base of the segments swollen. Length 12 mm., width across the abdomen 8 mm.

Color obscure, fulvo-testaceous tinged with ferruginous on the base of the scutellum and the humeral angles. Whole surface punctured with fuscous; these punctures becoming black in places, especially on the middle of the pronotum anteriorly, scutellum and costal area of the corium. On the lower surface there is a line on either side of the head beneath the base of the antennæ, a dot before the eye, a curved line below the expanded margin of the pronotum, a few dots and lines on the pleural pieces and the incisures at the margins, black. Sides of the pleuræ and venter strongly irregularly punctured with black, the disk smooth. An annulus before the apex of the femora, two on the tibiæ and a point on the knees fuscous or black; middle of the antennal joints dusky.

Described from one female taken in Florida and kindly given me by Mr. J. H. de la Torre Bueno. This insect has much the aspect of a small *Brochymena*, but in its generic characters it agrees entirely with *Pharnus* except for the produced contiguous cheeks, fimbriate margins of the pronotum and produced nodular humeri.

**Rhyparochromus angustatus** n. sp.

Form oblong, parallel-sided; black, with the legs ferruginous and the costal and sutural margins of the corium whitish, forming a distinct M when the elytra are closed. Length 5 mm.

Head black, minutely aciculate; vertex moderately convex, nearly square; cheeks and tylus produced in a blunt triangle, the front of the head less deflexed than in the European *prætextatus*. Antennæ flavo-testaceous; first joint surpassing the tylus by one-third of its length; second nearly twice the length of the first, blackish at tip; third shorter than the second, piceous becoming pale at base; fourth scarcely longer than the third, blackish. Rostrum castaneous, attaining the intermediate coxæ; second joint obviously but not greatly longer than the third. Pronotum subquadrate, minutely rugulose; anterior angles moderately rounded; sides distinctly and continuously but slenderly carinated, feebly sinuated; anterior lobe slightly convex, hardly twice the length of the posterior; the latter of a velvety piceous-black, con-



trasting with the dull black of the anterior lobe; hind margin rather deeply arcuated. Scutellum black, nearly flat, about equilateral. Elytra short, coarsely punctured; piceous-black inclining to castaneous exteriorly on the corium and along the commissural and scutellar margins of the clavus; the claval margin of the corium slenderly but conspicuously, and the costa more indefinitely whitish, thus forming an M-shaped mark when the elytra are closed. Membrane shorter than broad, rounded behind, white at base, abruptly pitchy at apex; Beneath black, coxæ and legs castaneous or rufo-ferruginous, darker at apex; anterior femora piceous across the middle, strongly incasated, with about three small teeth along the inner (anterior) edge, the apical the larger.

Described from nine examples from Victoria (presumably Vancouver Island) in the collection of the Museum of Comparative Zoology, and five from Olympia, Washington, in the Cornell University Collection. The Victoria specimens, which were kindly sent me by Mr. Henshaw, bare the MSS. name *Megalonotus angustatus* Uhler, which I have adopted, using, however, the earlier generic name *Rhyparochromus*. The elytra sometimes become pale castaneous, but the conspicuous M-shaped marking seems to be constant. I have seen only brachypterous examples. This is the second North American species of *Rhyparochromus* known to me. Of the other, *Megalonotus sodalicius* Uhler, I have seen two examples taken in California by Mr. J. C. Bradley and belonging to the Cornell University Collection.

**Plinthisus americanus** n. sp.

Closely allied to the European *lasiomerus*, a little larger and paler. Head impunctate, polished, apex of the cheeks produced in a minute spine either side of the tylus. Antennæ distinctly tomentose; first joint surpassing the tylus by one-half its length, second about one and one-half times the length of the first; third and fourth fusiform, each about the length of the first. Rostrum reaching nearly to the front line of the intermediate coxæ, the first joint attaining the prosternum, the second slightly longer. Pronotum but little narrowed anteriorly, the sides feebly sinuated posteriorly; anterior angles abruptly rounded behind the eyes; posterior lobe coarsely punctured, anterior smooth, polished, with a row of small punctures behind the anterior margin; hind edge feebly concave. Scutellum equilateral, a little raised above the elytra, closely punctured. Elytra polished, closely punctured, the punctures more obscure on the disk of the corium, those of the clavus larger and arranged in lines. Membrane short, attaining the middle



of the fifth tergal segment, rounded behind, without visible venation. Anterior femora strongly incrassated, armed with two short teeth placed inferiorly toward the apex. Length  $3\frac{1}{2}$  to 4 mm.

*Color:* Head and pronotum castaneous or piceous, the posterior lobe of the latter, the legs and the rostrum flavo-testaceous; scutellum piceous or black. Elytra flavo-testaceous or somewhat castaneous, becoming darker on the disk of the corium; membrane whitish. Beneath piceous varied with castaneous, the ventral segments edged with paler. Tergum piceous-black. Antennæ pale at base, becoming piceous apically. Normally this insect seems to be clothed with long pale hairs which are easily rubbed off.

Described from one male and two females taken at Franconia, New Hampshire, by Mrs. Annie Trumbull Slosson, and one female taken at Belleville, Ont., by Mr. J. D. Evans.

**Drymus crassus** n. sp.

Closely allied to *unus* Say, but larger and darker. Bucculæ more arcuated than in *unus*, leaving a broader rostral groove which reaches quite to the base of the head. Antennæ longer, the second joint proportionally longer than the third. Rostrum reaching to the posterior coxæ; in *unus* scarcely attaining the intermediate. Pronotum broader anteriorly and more convex than in the allied species; in the male the anterior lobe is scarcely if at all narrower than the posterior, the sharply carinate sides but feebly sinuated; posterior lobe a little paler and more coarsely punctured than the anterior, with a distinct medial depression as in *unus*. Scutellum as in *unus* but subcarinate behind the impressed disk. Elytra closely but more obscurely punctured than in *unus*. Pectus deeply punctured, propleura armed with a rounded tooth between the anterior coxæ which in the other species is small and acute; metapleural flaps impunctate and polished. Venter shagreened, scarcely punctured, with the minute fulvous pubescence much less conspicuous than in *unus*. Anterior femora much incrassated, armed with one stout tooth near the apex. Length 6-7 mm.

Colors darker and more obscure than in *unus*. Head, anterior lobe of the pronotum, pectus and scutellum black; antennæ, legs, posterior lobe of the pronotum, elytra and venter rufo-piceous, becoming darker on the clavus and disk of the corium. Membrane blackish-opaque, paler at base and marked with a pale spot at the tip of the corium. Rostrum and tarsi pale rufo-testaceous.

Described from three examples, one male taken by Wm. Beutenmuller in the valley of the Black Mountains, N. C., July 29th, 1906; a female from Camden, N. J., collected by S. T. Kemp, and a female taken on the summit of Mt. Washington, N. H., by Mrs. Annie Trumbull Slosson. This



is distinctly larger and darker than the species I identify as *unus*. The smaller and paler form agrees best with Say's description in having the antennæ "honey yellow," the sides of the pronotum distinctly arcuated with the carinate edges a "little depressed and translucent," and the length "one fifth of an inch," none of which characters would apply to the larger and darker *crassus*. On the other hand the elytra of the smaller species are distinctly paler on their base, a character not mentioned by Say, but this is much less conspicuous in some examples, and need not invalidate the determination.

**Phytocoris bipunctatus** n. sp.

Closely allied to *antennalis* and *annulicornis*; smaller, proportionately narrower and darker than the former, with the sternum and base of the femora pale sanguineous, and the elytra marked with a conspicuous round white dot near the apex of the corium. Length  $4\frac{1}{2}$  mm.

Head shorter than broad; vertex, viewed from above, a little longer than the breadth between the eyes, distinctly sulcate, slightly narrowed anteriorly, sloping, and then abruptly deflexed at apex; fusco-ferruginous; clypeus prominent, black, with a large white discal spot; throat pale rufous. Rostrum attaining the base of the abdomen; rufo-testaceous, piceous at tip. Antennæ surpassing the tip of the elytra; first joint a little shorter than the basal width of the pronotum, its thickness two-thirds the superior width of the eye, minutely pubescent, fusco-ferruginous, slightly varied with pale with a whitish annulus before the middle and another near the apex; second joint slender, black, biannulate with white, the basal annulus farther from the base of the joint than in *antennalis*; third joint two-thirds the length of the second, pale brown with the broad base and an ill-defined annulus beyond the middle pallid; fourth feeble, shorter than the first and darker than the third. Pronotum sub-campanulate; sides feebly arcuated; callosities small and rounded, prominent; color fuscous, becoming black posteriorly and ferruginous brown anteriorly; hind edge white, quadrisinuate before. Scutellum fuscous-brown or almost black, with the apex whitish and sometimes with a pale spot on either side of the base of the posterior lobe. Elytra fuscous or blackish, becoming paler along the middle of the corium posteriorly and sometimes on the clavus inwardly; corium with a conspicuous round white discal spot toward the apex; cuneus deep fuscous with two black marks on the margin next the membrane. Membrane fuliginous, the nervures darker, outer edge with a small pale mark at the apex of the cuneus and a fainter one a little beyond. Beneath fuscous, becoming paler on the pectus and disk of the venter. Sternum, coxæ, trochanters



and base of the femora pale rufous; anterior and intermediate femora becoming piceous toward their apex; hind femora obscure fuscous, irrorate with paler; anterior tibiæ blackish, triannulate with white; intermediate and posterior brown, obscurely varied with pale; tarsi brown, broadly annulate with pale. Genital segment of the male with a stout curved tooth before the sinistral genital notch.

Described from numerous examples swept by me from the dry grass in the open pine forests of Florida south of Sanford, and identified as *Phytocoris antennalis* in my list of Florida Hemiptera. This species is very close to *antennalis*, and especially to *annulicornis*, but I believe it distinct. The white elytral spots and the color of the legs are distinctive and apparently persistent. The general color also is darker than in *annulicornis*, and the basal joint of the antennæ is shorter than in *antennalis*.

Last July I took a characteristic example of *antennalis* at Ipswich, Mass., which extends its range considerably to the north.

#### **Dichrooscytus marmoratus** n. sp.

Pale yellowish-green more or less washed with clear green, especially on the pronotum and clavus, sometimes, and in life perhaps always, clear green on the pronotum, scutellum and elytra; costa, at least narrowly, yellowish; cuneus toward its apex and the veins of the membrane sanguineous; membrane fuscous irrorate with pale, especially toward the base, and marked with two larger pale spots on the margin beyond the tip of the cuneus; apical nervure of the corium darker or even sanguineous. Surface polished, clothed with short blackish hairs on the pronotum and elytra, with a few longer black hairs near the anterior margin of the pronotum. Head yellow, polished, impunctate; in the female broader than the front of the pronotum, but much narrower than in *suspectus*; base of the vertex very obscurely impressed either side. Antennæ rufo-testaceous, first joint surpassing the apex of the head by nearly one-half its length; second about four times the length of the first and about one-half its thickness, linear; third slender, one-half the length of the second, darker at apex; fourth still shorter and thinner but longer than the first, fuscous. Pronotum polished, impunctate; sides straight; collum linear, distinct; callousities prominent. Beneath yellowish, the propleura tinged with green. Legs pale, the tibiæ sometimes tinged or irrorated with rosy pink; tibiæ darker at apex; tarsi brown, black at tip. Length 5 mm.

Described from numerous examples taken at Almagordo, New Mexico, belonging to the Academy of Natural Sciences



of Philadelphia, and kindly loaned me for study by Dr. Skinner. The males have the pronotum more narrowed anteriorly, the eyes more prominent, the vertex narrower and more depressed and the rostrum shorter, not surpassing the hind coxæ. Of perhaps 150 specimens sent most were of some shade of yellowish-green, but a few were of a clear green with the sanguineous color confined to the margin of the cuneus and veins of the membrane. This species differs from *Dichrooscytus* by the narrower head, almost immarginate vertex, and longer basal joint of the antennæ. It has, however, the impunctate pronotum and general facies of this genus, and I believe it should stand here and not in *Lygus*. The irrorate membrane is conspicuous and distinctive.

**Lopidea cuneata** n. sp.

Oblong-ovate, broader than *media* and its allies; fuscous-brown with the narrow costa and the cuneus pale. Length 6 mm.

Head fuller and proportionately broader than in *media*, the vertex not so sunken; face broader below, the margins distinctly rounded beyond the insertion of the antennæ; color pale flavo-testaceous, base of the vertex black, large disk of the front fuscous with a broad pale longitudinal vitta; clypeus black, polished. Antennæ black; first joint as long as the width between the eyes; second as long as the head and pronotum together; third two-thirds the length of the second; fourth hardly so long as the first. Rostrum attaining the posterior coxæ or nearly so; piceous, with the sides of the first joint paler. Pronotum fuscous, with the anterior margin and the sides narrowly pale; broader and shorter than in *media*; the callousities very strongly elevated, almost tubercular, separated by a deep impression; anterior margin feebly concave, broadly depressed; sides broadly reflexed, a little sinuated; hind margin slightly concavely arcuated; posterior lobe dull, transversely rugose with a feeble depression. Scutellum fuscous, moderately convex. Elytra a little shorter and broader than in *media*, fuscous-brown; base, costa, and a short streak on the base of the cubital vein slenderly pale, the commissural nervure very narrowly so; cuneus pale, tinged with rufous within and tipped with black; membrane dark fuliginous. Beneath brown, more or less tinged with rufous along the sides. Legs brown; coxæ, trochanters, and sometimes the base of the femora whitish; propleura pale or suffused with rufous.

Described from one male and four female examples which were beaten from a large balsam poplar tree at Lancaster,



N. Y., on August 4, 1906, where they seemed to be feeding on plant lice. This species is a true *Lopidea*, although it is broader and darker than any other species yet described from this country. The pale streak on the cubital nervure, and the whitish or rosy cuneus readily distinguish this species.

Mr. Fordyce Grinnell, Jr., has taken an insect on the San Jacinto Mountains, California, at an altitude of 5000 feet, which probably belongs to this species. It is darker on the head, abdomen, and elytra, and the latter wants the pale streak on the cubital nervure and the black tip to the cuneus, and the scutellum is rufo-piceous.

***Hadronema festiva* n. sp.**

Form of *picta* but with the vertex swollen as in *robusta*. Color black, corium orange with a large black spot on the inner angle. Length  $3\frac{1}{2}$  mm.

Head prominent, the vertex strongly convex, especially in the female; front vertical, strongly impressed at the base of the very convex tylus. Rostrum reaching nearly to the base of the intermediate coxæ. Antennæ about as in *picta*, first joint very short and stout, armed with a few stiff black hairs; second over three times as long as the first, minutely pubescent; third a little longer than the second and thinner; fourth still more slender and shorter than the first. Pronotum longer than in *picta*, strongly narrowed anteriorly; sides feebly sinuated; hind margin slightly concave; humeral angles prominent; surface roughly shagreened; collar very narrow but distinct.

Color blackish piceous, sericeous pubescent and quite strongly pruinose, especially beneath; pronotum, elytra, and legs with longer whitish hairs; inner cheeks paler; slender hind edge of the ventral segments pale; corium fulvous, fading to yellowish inwardly and marked on the inner angle by a large blackish spot which connects with the black of the clavus; membrane smoky iridescent and paler at the margin and along the cuneus, the nervures blackish.

Described from numerous examples taken at Alamogordo, New Mexico, in late April and early May, belonging to the Museum of the Academy of Natural Sciences of Philadelphia. I can find no description agreeing at all with this insect. In many examples there is a greenish incrustation occupying the depressions on the base of the vertex and on the sides of the pronotum behind the callousities.



**CYPHOPELTA** n. gen.

Related to *Closterocoris*, but with the pronotum subcylindrical before, much as in *Pseudoxenetus*, and the scutellum strongly tumid. Head about as in *Closterocoris*, long ovate-conical, placed obliquely; vertex longitudinally feebly convex, sloping almost from the base, transversely a little convex; tylus with a longitudinal abbreviated groove on either side; loræ elongate-conical, convex; cheeks prominent; gula broad, convex, with a longitudinal depression on either side anterior to the eyes; eyes much elongated and placed obliquely. Antennæ slender, as long as the pronotum and elytra together. Rostrum reaching between the intermediate coxæ; first joint attaining the middle of the gula. Pronotum long, anterior lobe almost cylindrical, callousities scarcely distinguished; posterior lobe short, abruptly flaring. Scutellum strongly convex, with a deep constriction between the anterior and posterior lobes; the former partially exposed, the latter greatly elevated in a hemispherical nodule. Elytra longer than the abdomen, almost parallel, the sides very narrowly reflexed; surface obscurely punctured. Legs long and slender, the hind femora exceeding the tip of the abdomen; anterior coxæ strongly swollen. Type.—*C. modesta* n. sp.

**Cyphopelta modesta** n. sp.

Long, parallel sided; rufous; head, membrane, and apex of the abdomen black, elytra twice banded with white. Length 8 mm.

Head black, becoming piceous anteriorly, the orbits of the eyes dull rufous. Antennæ soiled testaceous; first joint as long as the greatest width of the head, lineate with piceous beneath; second more than twice the length of the first, linear, minutely sericeous; third about two-thirds the length of the second; fourth longer than the first but shorter and thinner than the third. Rostrum pale rufous, base and apex piceous. Pronotum minutely transversely rugulose, anterior lobe a little swollen before the transverse constriction; dull rufous, shading to piceous posteriorly, and in a less degree anteriorly; hind edge slightly emarginate and slenderly edged with white. Scutellum impunctate, highly polished on the tumid posterior lobe, which is elevated to the level of the highest point of the pronotum. Elytra and scutellum clear light rufous; the corium marked with an oblique slightly curved, narrow white vitta a little before the apex of the clavus, and



a blackish cloud on the apex inwardly; base of the cuneus broadly white; membrane blackish fuscous, the nervure still darker. Legs and beneath light rufous; osteolar orifice white; venter piceous black, polished, becoming rufous on the base and oviduct, the sixth connexival segment terminating in a distinct spine; posterior femora a little darker; tips of the tibiæ and the tarsi blackish.

Described from one female example taken on Mt. Wilson near Los Angeles, California, June 5, 1909, by Mr. Fordyce Grinnell, Jr. This is a handsome and interesting addition to the Hemipterous fauna of California. It recalls the Lygæid *Pamera bilobata*, but pertains to Reuter's new division *Cremnocephalaria* of the Capsidæ.

**Elidiptera fusiformis** n. sp.

Quite distinct from any other species known to me. Front banded; vertex short, elytra expanded at base, and vaguely banded with brown at base and across the middle. Length to apex of the elytra 11 mm.

Head short; vertex almost square, median line sulcate, lateral carinæ oblique, base broadly arcuated, almost parallel with the anterior margin. Front oblong, broadest at the apical one-fourth, sides sinuated, broadly laminate-expanded and translucent, apex angularly but not deeply excavated, median carinæ weak. Clypeus sub-triangular, sides feebly arcuated. Pronotum a little longer than the vertex, strongly carinated, hind margin angularly and rather deeply emarginate. Patagiæ large, transverse. Mesonotum large, closely aciculate, median carina feeble, lateral arcuated, strong anteriorly, weak posteriorly. Elytra fusiform when closed; broad at base, much narrower toward the apex.

General color piceous brown, becoming paler on the vertex, pronotum, apex of the elytra and abdomen; irregularly varied and irrorate with pale; carinæ and margin of the various parts mostly pale; apex of the scutellum whitish. Elytra closely inscribed with white, forming a broad band across the basal third, but omitting the humeral angles; apical third paler and less clearly inscribed; middle of the broad costal areola with three approximate oval black spots, and there is a brown patch on the stigma and a few smaller marks near the apex; nervures mostly pale. Front and pectus cream white with a narrow piceous band on the base, which crosses the eye and becomes black on the propleura; clypeus brown. Coxæ and legs pale brown. Abdomen pale brown, darker on the sides and apical segment. Wings slightly enfumed with brown nervures.

Described from one female in the collection of the Museum of Comparative Zoology which bear the label, "Goose Lake,



Siskiyou Co., Calif., Hollemann." This species has the banded front of *pallida* and the short vertex of *variegata*, but the form and general aspect are quite distinctive.

**Elidiptera Henshawi** n. sp.

Allied to *pallida*, but proportionately longer; front strongly banded, clypeus brown. Length to tip of the elytra: male, 9 mm.; female, 11 mm.

Head shaped as in *pallida*. Vertex elliptical, scarcely longer than broad, a little elevated at the apex, margins sharply carinate, median impressed line distinct. Front elliptical above, broader and rounder toward the apex; median carina distinct, apex obtusely angularly emarginate; clypeus elongate-triangular; its sides nearly rectilinear. Pronotum as in *pallida*, about as long as the vertex, rather broadly rounded before, broadly and obtusely emarginate behind. Patagiæ transverse, larger than in *pallida*. Mesonotal carinæ prominent. Elytra oblong, parallel, but little narrowed to the base. Last ventral segment of the female narrower than in *pallida*, and more angularly emarginate at apex. Ventral tooth of the male pygofer broad, subangularly emarginate at apex, as long as the base of the segment.

Color fuscous-brown above, minutely irrorate with pale, vertex and pronotum sometimes a shade paler; elytra obscurely varied with darker and marked with about two blotches on the discal areola, and three round blackish points on the middle of the costal. Beneath and legs pale brown; base of the front and sides of the pleural pieces piceous, sharply distinguished from the pale yellowish apex of the front and chest.

Described from one male and four females taken at "Pressy's" in Wenas Valley, Washington, July 6, 1882, by Mr. Samuel Henshaw, to whom I dedicate the species in acknowledgement of the willing assistance he has so frequently extended to me in my insect studies. This species has about the form of *septentrionalis*, but it is larger, and has a strongly banded front.

*Helicoptera pinorum*, described by Mr. A. B. Manee in the Entomological News for March, 1910, is the female of *Elidiptera opaca* Say, as I know from a specimen which he kindly sent me for my collection.

**Elidiptera floridæ** Walker.

Smaller than any of the allied species, about the size of *Catonia grisea*. Vertex strongly produced, considerably longer than its basal width, exceeded in length only in *colorata*, elliptically narrowed to the



rounded apex, median line sulcate. Front narrower than in *septentrionalis*, its sides more strongly sinuated and with the median line carinate. Pronotum produced almost to the anterior line of the eyes, truncate before; hind margin angularly emarginate, about as in *septentrionalis*; lateral carinæ prominent, median almost obsolete. Mesonotum but feebly convex, carinæ subobsolete, except the median for a short space anteriorly. Elytra narrow, the costa but feebly expanded.

Color a uniform fuscous-brown, scarcely variegated, a little paler on the vertex and pronotum; patagiæ pale cinerous. Elytra a little darker, very obscurely irrorated with pale posteriorly and with the costa somewhat paler; three black points near the apex as in most of the allied species, but none in the costal areole. Front of a uniform dark brown, its carinate edges and those of the vertex pointed with black; clypeus deep fuscous, almost black; sides beneath with a broad percurrent whitish vitta beginning on the cheeks before the antennæ, bordered above with blackish; posterior coxæ and the genital segments paler. Legs concolorous, brown. Wings deeply enfumed with fuscous nervures. Length scant 7 mm.

Lakehust, N. J., one male, taken May 29th by Mr. W. H. Davis. This insect agrees with Walker's description in every respect, except that the pale irrorations of the upper surface are almost obsolete and the red spot at the base of the abdomen on either side is represented by pale ferruginous. I have no doubt but it is the species described by him.

A single female, taken at the same place and but one day earlier, may belong to this species. It has a much shorter vertex and is paler with the elytral maculation quite distinct; the costal areola has the usual three black points, there are two larger ones on the disk of the corium, and the three near the apex are conspicuous; the front is broader with its sides rectilinear, its basal third is blackish, the apical two-thirds and the clypeus are a uniform brown; the lateral white vittæ beneath are scarcely distinguished, but the bounding black vitta above it is conspicuous. The differences here are more than I have seen between the sexes of any other species of *Elidiptera*, but I do not care to separate them without more material. Were it not for the very different shape and coloring of the front and vertex I would have no doubt about this being the female of *floridæ*. I now follow Kirkaldy and others in using the name *Elidiptera* Spinola, in place of



*Helicoptera* A. and S., for which latter name there seems to have been no adequate justification.

**Catonia dimidiata** n. sp.

Allied to *impunctata* Fitch, but easily distinguished by having the front entirely black, with the clypeus white, and the vertex and pronotum without the black discal fovæ. Head, pronotum, and mesonotum ferruginous-brown becoming light on the disk of the vertex and pronotum, and on the base and apex of the discal area of the mesonotum, the carinæ lighter anteriorly; discal areolæ of the vertex marked with darker brown. Front black, becoming ferruginous on the rounded apex of the head, margins strongly elevated, not obviously constricted between the eyes; clypeus white, minutely dotted with brown along the elevated margins; cheeks black above, white below, the antennal sockets pale. Pronotum dark brown beneath the eye, the carinæ and included surface paler, yellowish; patagiæ a little darker. Elytra testaceous brown, a little infuscated on the base of the corium, behind which is a vague whitish cloud; transverse veinlets and apex of the clavus whitish. Wings smoky with fuscous nervures. Legs whitish with a dusky spot on the base of the hind tibiæ exteriorly. Abdomen paler at apex and on the edges of the segments in the female; blackish in the male. Female genitalia substantially as in *impunctata*. In the male the median tooth of the basal valve is short triangular, its blunt apex attaining the middle of the plates, the margins either side of the tooth forming a moderate sinus and then retreating to the basal angles. In *impunctata* this median tooth is long and acute, attaining the apex of the plates, and the margins either side are deflected at right angles, making the basal portion of this valve of nearly equal length across its whole width. Length 6 mm.

Described from one female taken by me at Phoenicia, N. Y., in August, 1904, and one male and two females taken by Prof. John Barlow at Kingston, R. I. This is the "variety" of *impunctata* noticed by Fitch. In my review of this genus in 1907 I included it as the female of that species, having at that time seen only females of this form and males of the other. The present series from Prof. Barlow, however, shows them to be distinct species. *Catonia impunctata* has the carinæ and a transverse band on the front white, the median areoles of the vertex and pronotum, the deflected sides of the pronotum and the patagiæ black, and the chest and legs are immaculate whitish.



**Catonia costata** n. sp.

Small, testaceous brown, front unicolorous. Length  $4\frac{1}{2}$  mm.

Vertex broad and rounded before, its length scarcely more than one-half the width between the eyes; sloping from the base; the marginal and median carinæ moderately elevated; basal margin very feebly excavated, nearly straight. Front broad, oblong, slightly wider at apex, sides nearly rectilinear, surface convex, the carinæ feebly elevated. Clypeus broad and short, rounded at base, the carinæ feeble. Pronotum proportionately broad, about half the length of the vertex, less deeply and acutely emarginate than in our other species, carinæ moderately elevated; mesonotal carinæ distinct, nearly parallel. Elytra about as in *impunctata*, the nervures impunctate.

Color dull testaceous-brown; head paler and more tinged with ochreous; pronotum pale with a blackish cloud beneath the eye. Elytra fuscous-brown, the nervures paler in places; the short transverse nervures and the costa whitish, but not conspicuously so. Wings smoky hyaline, nervures fuscous; pectoral pieces fuscous, margined with pale; abdomen blackish, the segments more or less edged with ferruginous or dull sanguineous; genital pieces whitish. Legs pale testaceous-brown, the tarsal spines tipped with black.

Described from one female and five male examples taken by Mr. Fordyce Grinnell, Jr., on the San Gabriel Mountains near Pasadena, California, on June 17, 1909, at an altitude of 3000 feet. This is a plain little species of the size and form of *pumila*, but very distinct in the characters of the head and the unicolorous elytra and impunctate nervures, in which latter character it agrees with *impunctata*. It bears a slight resemblance to *Plectoderes basalis* Fowler, but is smaller and wants the pale base to the elytra.

**Catonia cara** n. sp.

Widely distinct from any described North American species. Pale luteo-testaceous becoming castaneous on the base of the elytra, behind which is a broad transverse pale band. Length 6 mm.

Head short and broad as in *costata*. Vertex transverse, anterior and posterior margins almost parallel, slightly arcuated, its length about two-thirds the width between the eyes; carinæ distinct, forming an obtuse triangle; anterior edge rounded to the broad rather convex front on which the carinæ are but feebly raised; clypeus longer than in *costata*. Pronotum very short, linear. Mesonotal carinæ straight and slightly divergent posteriorly. Elytra ample, rather thin, nervures impunctate.

Head, pleural pieces and legs pale yellowish testaceous; antennal setæ and tarsi black; thorax and elytra luteo-testaceous; lateral com-



partments of the mesonotum and base of the elytra as far as the apex of the scutellum pale castaneous; beyond this on the closed elytra is a broad transverse pale yellowish vitta, which is broader on the commissure where it touches the point of the scutellum and apex of the clavus; transverse nervures near the apex indistinctly paler; ground color of the elytra intensified next the pale transverse band. Abdomen more or less fulvous.

Described from one pair taken in copulation on Mt. Wilson, California, September 14, 1908, by Mr. J. C. Bradley. This species is very distinct by its yellowish color and the broad transverse pale band bordered with castaneous, on the elytra.

**Cixius lepidus** n. sp.

Black, with the carinæ marked with flavo-testaceous. Elytra whitish hyaline, the base and a large stigma fuscous; nervures strongly punctured with fuscous. Length: male, 5 mm.; female, 6½ mm.

Head well produced; vertex almost quadrangular, its length about equal to the width between the eyes; passage to the front broadly rounded, without the transverse apical compartment found in our other species; basal compartment almost an equilateral triangle, its apex rounded, its surface depressed, punctured, with a median carina at base. Front broad, but moderately narrowed at base; median carina distinct, third ocellus obsolete, apical suture strongly arcuated. not at all angled in the female, scarcely so in the male; color piceous, becoming paler or testaceous at base, especially in the female. Clypeus deep black, median carina paler, lateral carinæ slender and scarcely paler. Pronotum of equal length across its whole width; pale brownish-testaceous, darker in the fovæ, black under the eyes. Tegulæ large and conspicuous, testaceous-white. Mesonotum black; carinæ and hind margin of the scutellum pale in the female. Elytra hyaline with a very decided milky cast; a transverse band across the apex of the scutellum which may include the whole basal portion of the elytra and the large stigma, deep fuscous; veins strongly dotted, the transverse nervure toward the base fuscous. Wings whitish hyaline with slender brown nervures. Beneath black; disk of the metapleura in part fulvo-testaceous. Legs brown, the acetabulæ, knees, and bases of the tibial spines pallid. Sides of the genital segment of the male broadly rounded, the ventral sinus broad, with a very short rounded median tooth; plates very short, but little exceeding the sides of the genital segment, ob-triangular or imperfectly fan-shaped at apex, which is touched with whitish; pygofers but little exceeding the plates, subconical at apex, and including the fulvous anal tube. In the female the apical projection of the pygofers is unusually large, slender and acute at tip. In both sexes the lower surface and genital segment are covered with a whitish tomentum.



Described from one pair taken at Boulder, Colorado, by Prof. T. D. A. Cockerell in August and September. This species has much the aspect of *basalis*, but it is smaller and is well distinguished by the quadrate vertex with long basal fovæ and the want of a transverse compartment at apex. It makes an interesting addition to our Fulgorid fauna.

**Stenocranus felti** n. sp.

Closely allied to *dorsalis* and *lautus*, differing principally in having the apex of the vertex broader and more rounded, the front proportionately broader and shorter, with the intra-carinal compartments pale brown or almost concolorous, and the pygofers of the female much broader toward their apex, almost pyriform.

Color a soiled yellowish-testaceous with the carinæ a little paler and the dorsum marked with a whitish vitta from near the front of the vertex to the tip of the scutellum, which is continued by the pale commissural nervure of the closed elytra. Basal joint of the antennæ with a black mark inferiorly, a similar mark is on the cheek below the ocellus, and the antennal socket has a distinct black marginal spot anteriorly. Connexival segments and outer pleural pieces with blackish spots, those of the metapleura much larger and deeper black. Femora and tibiæ lineated with black; pygofers of the female dark brown; the tergum mostly black. Venter in the male black with the segments edged with orange. Elytra in the female pale yellowish hyaline with the nervures a little darker, sometimes becoming almost black on the clavus and inner margin of the corium; the second apical nervure and the apex of the others deep black. In the male the nervures are almost entirely blackish fuscous, and the black of the second apical nervure is spread over the adjoining areole. Length to the tip of the abdomen 3 mm.; to the tip of the elytra in the longest winged examples 5 mm.

Described from numerous specimens taken by me at Bretton Woods, N. H., June 30, 1909, and one female taken at Speculator, N. Y., July 20, 1909, by Dr. E. P. Felt, to whom I take pleasure in dedicating this pretty species. Speculator is located in the Adirondack region of New York state, and my specimens, which were swept from a low wooded swamp back of Mt. Washington Hotel, are from the base of Mt. Washington, where the insect fauna is very similar to that of the Adirondacks.