

- Sarcophaga*, sp. Issued April 23, 1890; 1 specimen.
- Helicobia quadrisetosa*, Coq. Issued Aug. 6 and 30, 1889; 2 specimens.
- Pollenia rudis*, Fabr. Issued Dec. 23, 1889; 1 specimen.
- Family MUSCIDÆ.
- Musca domestica*, Linne. Issued Aug. 30 and Sept. 2 and 4, 1889; 20 specimens.
- Morellia micans*, Macq. Issued Aug. 30, 1890. Issued Dec. 23, 26, 27, 28, 30 and 31, 1889; Jan. 2, 6, 8, 9, 10, 11, 13, 14, 16, 17, 18, 20, 25 and 27, Feb. 1, March 25, April 5 and 9, 1890; 125 specimens.
- Myospila meditabunda*, Fabr. Issued Aug. 26, 28, 29, 30, Dec. 23, 1889; Jan. 9, March 25, 26, April 2, 9, 14, 15, 1890. Issued April 5, 1890; 48 specimens.
- Hamatobia serrata*, Desv. Sept. 17; 2 specimens.
- Family ANTHOMYIDÆ.
- Hydrotæa armipes*, Fallen. Issued Sept. 27, 30, Oct. 4, 1889; Jan. 2, 6, 7, 8, 9, 10, April 24, 1890; 38 specimens.
- Hyetodesia umbratica*, Meigen. Issued Feb. 13, 21, April 2, 9, 14, 15, 1890.
- Ophyra leucostoma*, Wied. Issued Sept. 6, 1889; 11 specimens.
- Limnophora*, sp. Issued Aug. 30, 31, 1889; 5 specimens.
- Cænoscia lata*, Walker. Issued April 25, 1890; 1 specimen.
- Cænoscia flavicoxæ*, Stein. Issued Aug. 31, 1889; 4 specimens.
- Phorbia*, sp. Issued March 29, 1890; 1 specimen.
- Family SEPSIDÆ.
- Sepsis violacea*, Meigen. Issued Aug. 28, 1889; 8 specimens.
- Family BORBORIDÆ.
- Sphærocera subsultans*, Fabr. Issued Aug. 30, 1889; 7 specimens.
- Limosina albipennis*, Rondani. Issued August 28, Dec. 23, 1889; 2 specimens.

ACKNOWLEDGMENT.

I desire to publicly express the deep indebtedness of the Entomological Society of Ontario to O. C. Poling, Esq., of Quincy, Ill., for his generous gift to its exotic collection, of a box of mounted butterflies in prime condition, numbering 50 specimens of 30 named species and varieties, many of them being exquisitely beautiful forms.

J. ALSTON MOFFAT, Curator.

NEW JASSIDÆ FROM THE ROCKY MOUNTAIN AND
PACIFIC REGION.

BY E. D. BALL, FORT COLLINS, COLO.

(Continued from page 11.)

✓ EUTETTIX MILDREDÆ, n. sp.

Form and general appearance of *pulchella*; colour pattern of *scaber*, but with extra markings, and different colours on pronotum and elytra. Length, 5.5 mm.; width, 1.75 mm.

Vertex slightly angularly rounded, transversely depressed before the apex; front as in *scaber*, the margin between front and vertex more strongly produced. Pronotum slightly angularly rounding anteriorly, much more so than in *scaber*; lateral angles scarcely apparent, rounding from eye; pronotum and scutellum convex, elevated.

Colour: vertex orange yellow, paler at base; scutellum orange, the basal angles and the margins at apex irrorate with fuscous. Pronotum dirty white, some black spots next the eyes; disc irrorate, pale olive brown, omitting an oval spot on the posterior disc on either side and the median line. Elytra milk white, with black margined areas of olive brown, as follows: All of clavus except a semicircular spot at base and another at middle of claval suture; an oblique band on corium, beyond this spot narrowing to the costa. There are three pairs of black spots along the sutural margin of clavus, the apical pair largest. The claval suture between the white spots, and the anterior and costal margins of the oblique band, heavily black. Inner apical cells and a few spots on costa irrorate with black. Face orange, a black spot on outer angle of either lora. Below pale yellow and fuscous.

Genitalia: ultimate ventral segment of the female about twice the length of the penultimate, the posterior margin broadly, slightly rounding, the median third produced in two rounding lobes; the notch between them not as deep as their length, the lobes usually black; male valve obtusely triangular, a little over half the length of the ultimate segment; plates long triangular, about three times the length of the valve, the apex attenuate, filamentous, together with the margin clothed with long silky hairs.

Described from three females from Colorado Springs, taken by the author, and fourteen examples of both sexes from Manitou, collected by Prof. Van Duzee. This is one of the prettiest Jassids that I have ever seen, and I take pleasure in naming it after my wife, whose careful drawings will add much to the value of my future synoptic work.

EUTETTIX PERELEGANTIS, n. sp.

Form and colour pattern of *Mildredæ*, slightly smaller and darker. Length, 5 mm.; width, 1.5 mm.

Vertex slightly more angular than in *Mildredæ*, distinctly longer on middle than against eye, transversely depressed; front narrower than in *Mildredæ*, not rounding in to the clypeus. Pronotum not as convex, the posterior margin scarcely emarginate.

Colour: vertex pale creamy, six equidistant, pale fulvous spots on margin, basal half sparsely irrorated with pale fulvous. Pronotum dirty white, heavily marked with black behind the eyes; a broad parallel margined stripe on either side the median line, olive brown. Scutellum brownish fuscous, irrorate with pale, a small spot at apex, a pair of larger quadrangular ones on lateral margins back of the suture, and a minute one at each basal angle, milk white. Elytra, colour and pattern as in *Mildredæ*. Face dirty white spots on loræ as in the former species. Below fuscous and pale.

Genitalia: ultimate ventral segment of the female over twice the length of the penultimate, the posterior margin broadly rounding, the median fourth roundly emarginate one-fourth the depth, with a stout median tooth often bidentate at the apex; male valve obtusely triangular, the apex roundly truncate, trilobate; plates three times the length of the valve, long triangular, the apex acute, filamentous, margins with silky hairs.

Described from five females and one male from Salida, Ridgway and Durango, Colo. Readily separated from *Mildredæ* by the colour pattern of the vertex, pronotum and scutellum, and the distinct female segment.

EUTETTIX SAUCIA, n. sp.

Form and general appearance of *scaber*, smaller and paler, the vertex mostly pale. Length, 4.5 mm.; width, 1.5 mm.

Vertex longer, narrower and more angulated than in *scaber*; face narrower above, longer than its basal width, rounding to the clypeus. The pronotum broadly and evenly rounding in front, truncate behind, almost twice the length of the vertex.

Colour: vertex pale yellow, six minute points on anterior margin and three irregular irrorate patches on posterior margin brownish fuscous. Pronotum white, coarsely irrorate with dull brown except a narrow lateral margin and traces of three pale lines. Scutellum more finely irrorate, three ivory white points in a triangle beyond the transverse line. Elytra

milky white, closely and finely irrorate with dull brown, as follows: All of clavus except a narrow strip along basal two-thirds of claval suture, once or twice interrupted and broadened at the end; a rather narrow oblique strip across corium beyond this and some irregular markings towards the apex, which form two definite spots on the costa. Two pairs of pale spots along the sutural margin of clavus. Face pale yellow, below pale and fuscous.

Genitalia: ultimate ventral segment of the female nearly twice longer than penultimate, the posterior margin nearly truncate from the rounding angles, with two triangular, slightly protruding, median teeth; male valve very obtusely triangular; plates long triangular, their apices attenuate, black, clothed with fine silky hair.

Described from a pair from Denver, a male from Fort Collins, Colo., and another from Tucson, Ariz. This species is closely allied to *scaber*, from which the longer vertex, smaller form, lighter colour and absence of distinct band on vertex will easily distinguish it.

✓*EUTETTIX SCITULA*, n. sp.

Resembling *seminuda*, but with the pronotum darkened up. Length, 5.5 mm.; width, 1.5 mm.

Vertex almost parallel margined, twice wider than long, half the length of the pronotum, strongly depressed. Front rather flat, its length and breadth about equal. Pronotum long, its lateral angles distinct, disc but feebly convex.

Colour: vertex pale creamy yellow, six pale fulvous spots along the anterior margin, sometimes a pair of spots near eyes on basal half. Pronotum dull white, coarsely irrorate with dark fulvous, omitting the pale yellow anterior margin. Traces of three pale stripes. Scutellum pale, the fine dark brown irrorations usually heaviest in a spot just within the basal angles on either side, and another behind the transverse suture. Three spots in a triangle on apical half ivory white; posterior disc light. Elytra milky white, a few coarse brown irrorations along the humeral and sutural margins before the middle, a transverse band behind the middle as in *seminuda*, but darker brown, and some irregular infuscations towards apex. Face and below pale yellow, pale fuscous arcs on front.

Genitalia: ultimate ventral segment of female twice the length of penultimate, the posterior margin slightly rounding, with two small roundly angular, median teeth; male valve obtusely triangular; plates long triangular, their apices attenuate, infusate.

Described from numerous specimens from Fort Collins, Pueblo, Salida and Grand Junction, Colo. This species is most closely related to *seminuda*, but the genitalia and pronotal band will at once distinguish it.

↓ EUTETTIX PULLATA, n. sp.

Form and general appearance of *scitula*, but darker, approaching *perlegantis* in shade, but lacking the definite pattern of that species. Length, 5.5 mm.; width, 1.5 mm.

Vertex two and one-half times wider than long, half the length of the pronotum, transverse depression very shallow, front broad and flat. Pronotum rather flat, scutellum transversely depressed, the apex swollen, elevated.

Colour: vertex white or pale yellow, a narrow fuscous line just in front of eyes, in front of which are four dots, and behind which are three large irregular, sometimes confluent, irrorate patches. Pronotum light, coarsely and somewhat sparsely irrorate with brown. Scutellum with a brownish fuscous patch just within each corner, disc pale or orange yellow. Elytral pattern as in *scitula*, but broader and darker; clavus entirely reticulated except for two transverse bands, one at base and a broader, interrupted one before the middle, the white area of the corium with a few dots or reticulations.

Genitalia: ultimate ventral segment of female three times the length of the penultimate, the posterior margin broadly rounding, the median fourth triangularly excavated, the apex of this excavation broad, rounding or bidentate; male genitalia as in *scitula*, valve obtuse, plates long triangular, the margins straight, tips attenuate.

Described from eighteen specimens from Manitou (Van Duzee), and five from Colorado Springs and Salida, Colo., by the author.

↓ EUTETTIX MUNDA, n. sp.

Form of *jucunda*, Uhler, longer and redder. Resembling *costamaculata*, Van D., but with the costa reticulate. Length, ♀ 6 mm., ♂ 5 mm.; width, 1.75 mm.

Vertex sloping, transversely depressed, parallel margined, three times wider than long, two-fifths the pronotal length; front longer than its basal width, the margins evenly narrowing to the clypeus. Elytra broad, much longer than the body, the apices flaring; venation distinct, the second cross nervure present, joining the fork of the inner branch of the first sector in nearly a straight line, the inner continuation of this fork leaving this line at about the middle.

Colour: vertex fulvous, a pair of approximate spots on tip, and sometimes a spot on either side of disc at base, fuscous. Pronotum pale olive, somewhat washed with fulvous, the posterior disc omitting the margins irrorate with testaceous. Scutellum pale, the apex and a point on each lateral margin ivory white, a pair of spots between these, black, a large spot just inside either basal angle and a pair of dots on disc testaceous. Elytra milky white, reticulated with coarse pigment lines between the sectors, and washed with brown; a definite light band at base, widest on the costa, and a narrower, less definite one across the second cross nervure, a heavy fuscous spot before the middle of the sutural margin, a smaller one behind, shut off by a white crescent, and a third at apex of clavus. Apical cells somewhat infusate. Face fulvous, below pale fulvous.

Genitalia: ultimate ventral segment of the female over twice the length of the penultimate, the lateral margins narrowing to the slightly produced lateral angles, posterior margin between these angles truncate with a slightly produced, rounding, median lobe. Male valve obtusely angular, the apex produced, plates broad, slightly concavely narrowing to an acute point, four times the length of the valve, the apex curving up.

Described from seven females from Palmer Lake, Salida, Ridgway, Dolores and Durango, Colo., and one from White Mts., N. Mex., from Prof. Cockerell.

✓ *EUTETTIX MANITOU*, n. sp.

Form and general appearance of *modesta*. Smaller and more distinctly golden yellow, especially in the male. Length, ♀ 4.5 mm., ♂ 3.75 mm.; width, ♀ 1.5 mm., ♂ 1 mm.

Vertex a trifle over half as long as its basal width, evenly rounding or very slightly angulate, disc slightly depressed, passage to front more rounding than in the preceding species. Pronotum more rounding anteriorly than usual in this genus. Elytra very flaring in the female, scarcely so in male, venation as in *oculea*, claval nerves tied together and to the suture before the middle, central anteapical cell constricted, usually divided.

Colour: female, vertex pale yellow, a pair of approximate spots at apex fuscous. Pronotum pale olive washed with golden, omitting about three pale stripes. Elytra milky, nervures brown, becoming fuscous before apex and on costa, disc with a testaceous brown cloud which is interrupted by a narrow, parallel margined, transverse light band just before the black-tipped clavus and another irregular band before the

apical cells. A few light spots at base of clavus and along the suture. Male, vertex lemon yellow, pronotum, scutellum, all the clavus and the adjoining part of corium bright golden yellow. Apical and costal margins of elytra yellowish subhyaline, the apical veins and the apex of clavus fuscous, some milky spots around the second cross nervure.

Genitalia: ultimate ventral segment of female three times the length of the penultimate, the posterior margin very slightly rounding with a broad, median production which is rounding or slightly bilobed; male valve very broad, obtusely rounding, the apex produced, plates four times the length of the valve, concavely narrowing, the margins and apex upturned.

Described from four females and two males from Manitou and one male from Dolores, Colo. The two Manitou males were taken by Prof. Van Duzee. The females of this species are quite similar to *modesta*, but the male is much smaller and of a bright golden yellow. The genitalia are quite distinctive.

↓ EUTETTIX OCULEA, n. sp.

Similar to *jucunda* in form, slightly broader and shorter, vertex fulvous. Eyes bright red. Elytra lacking the brownish cast of *munda*. Length, ♀ 4.75 mm., ♂ 4.25 mm.

Vertex not quite half as long as its basal width, two-thirds the length of the pronotum; the front longer than its basal width, clypeus broadly expanded at apex. Elytra rather broad and flaring, much longer than body, venation as in *munda*.

Colour: vertex fulvous, a pair of spots on the apex, a line in the depression and a spot on either side of the disc testaceous. Pronotum milky, the anterior margin washed with fulvous, anterior half of disc irrorate with fuscous. Scutellum pale fulvous, the basal angles and a pair of spots on the disc testaceous, the transverse line black. Elytra milky, the nervures and transverse pigment lines along claval suture, the costal margin and a spot in the central anteapical cell fuscous. A few fuscous spots along the sutural margin and on the apical veins. Face fulvous, front washed with testaceous, femora dark. Eyes bright red.

Genitalia: ultimate ventral segment of female three times the length of the preceding, lateral margins narrowing, posterior margin slightly angularly produced from just within the lateral angles, the apex roundly bilobed; male valve very broad and short, posterior margin nearly truncate, with a median tooth, plates broad, concavely narrowing, their apices attenuate, the inner margins of which are concave.

Described from fourteen specimens from Rifle, Ridgway and Dolores, Colo. This and the two preceding species belong to a small group which includes *jucunda*, Uhler; *costamaculata*, Van D., and *modesta*, O. & B. They possess the second cross nervure, and have been referred to *Allygus* by some authors.

✓ *ATHYSANUS LITIGIOSUS*, n. sp.

Broad and short, vertex almost parallel margined. Colour pale, with three transverse bands on vertex and dense irrorations on pronotum and elytra fuscous. Length, 5 mm.; width, nearly 2 mm.

Vertex broad and short, scarcely extending in front of the eyes, two and one-half times wider than long, scarcely longer on middle than against eye. Front very broad above, narrow below, scarcely longer than wide, disc feebly convex. Pronotum broadest behind, where it equals or slightly exceeds the width of the eyes, nearly three times the length of the vertex. Elytra broad, venation strong, resembling *extrusus*, the central antepical cell rather long, enlarged at the apex.

Colour: anterior half of vertex black, almost divided into two transverse bands by a light line which is parallel with the yellow line separating the vertex and front, posterior half of vertex orange yellow, divided by an interrupted transverse fuscous band. Pronotum ivory white, heavily irrorate and vermiculate with fuscous, a few definite spots behind the eyes. Scutellum dark testaceous, the margins and a pair of irregular longitudinal lines white. Elytra ivory white, the nervures and many irregular reticulations fuscous, a band on tip and another across the apex of the clavus, a spot on the costa between the bands and another in the inner discoid cell fuscous. Between these bands subhyaline, especially along the margin. Face all black except a light line just below and parallel with the basal line. Legs black, the spines and an annulus on the posterior tarsus orange.

Genitalia: male valve broad and obtuse, angular, plates broad at base, about twice the length of the ultimate segment, roundly narrowing to the acute apices, from which extend a pair of short divergent filaments.

Described from a single male received from Mexico (O. W. B.); probably from Cuernavaca. It is very distinct from any described form, and is not a typical *Athysanus*. The head and markings suggest *Scaphoideus*, but the form is too broad. The elytra are very much like some *Phlepsius* forms.