

## SOME NEW JASSIDÆ FROM THE SOUTHWEST.

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

✓ *Phlepsius lascivius*, n. sp.—Resembling *altus*, slightly larger and lighter coloured; margin of the vertex black either side of a light tip. Length 6 mm.; width 2 mm.

Head as wide as the pronotum, vertex depressed at the base, anteriorly convex and rounding to the front, the apex slightly angled, hardly half longer than at eye, two and one-half times wider than long, more than half as long as the pronotum, front broad, convex in both diameters, roundly narrowing below; clypeus with the margins straight; elytra rather stout and straight, flaring behind, the claval nervures parallel, not united.

Colour: soiled yellowish white closely inscribed with brownish fuscous. Vertex with an irregular black cloud either side of the white apex, back of this a white crescent, behind which the surface is irrorate with pale fulvous brown, a semi-pupillate spot either side at the base; face heavily irrorate with fuscous, the black clouds of the vertex uniting below the apex, a few light arcs on the front and a light band across the clypeus and loræ; pronotum closely irrorate with fuscous; scutellum washed with dirty fulvous, a pair of black points on the margin on either side; elytra milk white, finely inscribed with fuscous, which is not in irregular lines except on costal and apical margins.

Genitalia: ultimate ventral segment of the female very long, the posterior margin truncate, the median third with a pair of very slight, evenly-rounded lobes, between which there is a distinct notch; male valve very broad, obtusely triangular, plates three times the length of the valve, broad at base, roundly narrowing half their length, then produced as bluntly pointed divergent lobes.

Described from eight females and four males taken at Holly, Pueblo, and Fort Collins, Colo., and Kimball, Neb. Part of the Fort Collins specimens came from back in the mountain gulches.

✓ *Phlepsius turpiculus*, n. sp.—Resembling *cinereus*, but more heavily irrorate. Pale straw yellow, irrorate with fulvous brown. Length, ♂ 7 mm., ♀ 6 mm.; width, ♀ 2 mm., ♂ 1.5 mm.

Head as wide as the pronotum, vertex but little longer on middle than against eye, half as long as the pronotum, surface convex, passage to the front roundly angulate; front broad above, feebly convex, almost angled at the antennæ; clypeus narrow just before the base; elytra long,

narrowing apically; veins on clavus sometimes tied before the middle, but not converging.

Colour: a dirty creamy yellow, washed and irrorate with brownish fulvous, vertex and face washed and very finely irrorate with dirty fulvous, omitting a light line marking the boundary between them, and a crescent behind the apex of the vertex; elytra rather coarsely and uniformly irrorate, lower side and legs washed with fulvous, scarcely marked.

Genitalia: ultimate ventral segment of the female twice the length of the penultimate, slightly notched in the middle of the posterior margin, either side of which it is slightly sinuated to the rectangular lateral angles; male valve triangular, the margins indented midway to the apex, plates gradually narrowing to half their basal width, then extending as acutely tipped, attingent, finger-like processes four times the length of the valve.

Described from numerous specimens collected at Holly and Fort Collins, Colo., and at Stratton, Neb. This species and *lascivius* have female genitalia much alike in pattern, while the male plates are quite different; those of *turpiculus* resembling *irroratus*, while *lascivius* resembles *nebulosus*.

✓*Phlepsius graphicus*, n. sp.—Resembling *superbus*, slightly longer and heavier built, the lobate commissural line distinct. Length 7 mm.; width 3 mm.

Head narrower than the pronotum, vertex sloping, the margin distinct but not compressed; width at base twice the middle length, very slightly longer on middle than at eye, more than half the length of the pronotum; front broad above, rounding to the spatulate clypeus below; elytra long, flaring apically, the claval nervures tied by a cross nervure before the middle.

Colour: ground colour soiled straw yellow, vertex and pronotum irrorate with testaceous, a round spot on either side the vertex at the base, and pupillate spots on the pronotum behind these, a pair of round spots on the scutellum, the apical part light; elytra pale, the nervures and irrorations brownish fuscous, the scutellar margin and a lobate commissural line light, irrorations gathered into fuscous spots along the costa; face heavily irrorate with brownish fuscous; legs light, marked and lined with fuscous.

Genitalia: ultimate ventral segment of the female three times as long

as the penultimate, lateral margins sloping, lateral angles slightly produced and rounding, posterior margin with two rounding teeth on each side of the deep median incision, the outer pair extending obliquely inwards, twice as long as the inner pair; male valve less than half as long as the ultimate segment, semicircular, plates twice the width of the valve, almost semicircular, slightly elongate, the margin fringed with fine white hairs, four strong spines inside the margin on either side.

Described from fourteen specimens from Wray and Fort Collins, Colo., and Kimball, Neb.

√ *Phlepsius cumulatus*, n. sp.—Intermediate in size and colour between *graphicus* and *superbus*, lobate commissural line faint. Length 6.5 mm.; width nearly 3 mm.

Head narrower than the pronotum, vertex nearly parallel margined, slightly sloping, passage to the front distinct but not angled, front broader than in *superbus* and not as convex; elytra broad and slightly compressed behind, the irrorations finer and weaker than in *graphicus*.

Colour: yellowish fulvous irrorate with a rich testaceous brown shading to fuscous where the irrorations are thickened up; the anterior margin of vertex with a light line interrupted in the middle by a red point, two fuscous points on the disc of the scutellum, the commissural line faintly lobate; below tawny yellow, the front heavily marked with brownish fuscous, the rest of face and legs maculate.

Genitalia: the ultimate ventral segment of the female two and one-half times longer than the penultimate, cleft in the middle nearly to the base by a triangular notch, either side of which there is another slight notch; from the outer lobe thus formed it rounds off to the base without lateral angles; male valve triangular, plates twice the length of the valve, the sides roundly angulate, the tips slightly angularly divergent, a dark spot at the inner angle at the base, the margin fringed with fine hairs, the submargin with a few white spines.

Described from numerous specimens taken at Fort Collins, Virginia Dale, Pinewood, and Livermore, Colo., all within the mountains, from the first foothills up to 7,000 feet.

Variety *arctostaphylæ*, n. var.—The preceding species was swept as larvæ and adults from Snowberry (*Symphoricarpos* sp.), where it was found in abundance; a little higher up on the mountains a few specimens, along with their larvæ, of a smaller and darker species were taken from

Bearberry (*Arctostaphylos uva-ursi*); superficially they resemble dark specimens of *altus*, but structurally they could not be separated from *cumulatus* with the material in hand.

They are shorter and heavier than *cumulatus*, with short broad elytra which just cover the abdomen. In colour they are a much darker testaceous, shading to fuscous.

✓*Phlepsius albidus*, n. sp.—Small, pale greenish white, resembling *Eutettix insana* until closely examined, slightly more robust. Length 4.5 mm.; width 1.25 mm.

Head as wide as the pronotum, vertex flat, slightly sloping, slightly but distinctly angled before, a little over half as long as its basal width, two-thirds the length of the pronotum; front convex in both diameters, scarcely narrowing until just before the apex; elytra moderately long, compressed behind, the claval nervures straight.

Colour: vertex face and scutellum pale, creamy yellow; pronotum with a greenish cast; elytra white, with fine, almost microscopic, greenish fuscous irrorations, a dark point at apex of clavus and a pair at the outer angles of the loræ; beneath greenish white.

Genitalia: ultimate ventral segment of the female about twice longer than the penultimate, posterior margin slightly rounding, two small rounding lobes faintly outlined at the centre.

Described from four females taken at Pueblo, Colo. In the white colour and the greenish character of the irrorations this species is very distinct from any before described.

✓*Eutettix insana*, n. sp.—Form of *modesta* nearly, but smaller, pale, slightly greenish, white, peppered all over, thickest on the elytra, with small round black specks. Length, ♀ 4 mm., ♂ 3.25 mm.; width 1 mm.

Vertex nearly flat, a third longer in the middle than at the eye; three-fourths as long as the pronotum, two-thirds as long as its basal width, rounding to the convex front, which is slightly expanded below the antennal pits, clypeus convex-margined above; elytra moderately long, flaring as in *modesta*, venation rather weak, the claval nervures either coalescing or tied across in the middle.

Colour: vertex and face pale greenish orange, vertex with a few small spots; pronotum olive with scattered dark dots; elytra white, sprinkled all over with small round dots which appear to be on the surface, all below white, somewhat dotted on legs, connexivum and pygofers.

Genitalia: ultimate ventral segment of the female three times the length of the penultimate, angularly excavated from the acute lateral angles half way to the base in the middle, from which arises a strap-like tooth, nearly equalling the lateral angles, its apex rounded; male valve not as long as the ultimate segment, very obtusely triangular, plates broad at base, triangularly narrowing to one-third their original width, then extending as acutely tapering up-turned points.

Described from numerous specimens taken at Pueblo, Colo.

*Eutettix stricta*, n. sp.—Form of *insana*, but narrower, pale yellow, with a golden reflection, especially in the males. Length, ♀ 4 mm., ♂ 3.5 mm.

Vertex nearly parallel margined, almost twice wider than long, as wide as the pronotum is long, the surface slightly depressed, bluntly rounding to the front, face as in *insana*; elytra rather long, narrowing behind, veins on clavus not united.

Colour: vertex orange or greenish yellow, sometimes a pair of spots behind the apex, face lemon yellow, front with about seven short brown arcs, the upper pair very oblique; pronotum olive or yellowish; scutellum orange, a pair of brown spots on the disc; elytra greenish or golden subhyaline; below lemon yellow, rostrum orange.

Genitalia: ultimate ventral segment of the female two and one-half times the length of the penultimate, the lateral margins narrowing posteriorly, posterior margin truncate, with a broad just noticeable median projection; ovipositor rather long, orange; pygofers narrow, greenish; male valve very short and broad, about half the length of the ultimate segment, plates very broad at base, long triangular, with the acute apices produced and coloured bright orange.

Described from numerous examples collected in Ariz. by Dr. Kunze.

*Deltocephalus grammicus*, n. sp.—Form of *albidus* nearly, but longer and narrower. Lemon yellow, with six brown stripes on pronotum and elytra. Length 5.25 mm.; width 1.25 mm.

Vertex flat, roundly right angled, a fifth longer than its basal width, over half longer on its middle than against the eye, a fifth longer than the pronotum; face making an acute angle with the vertex, front very narrow, resembling a *Platymetopius*; elytra long, flaring, venation similar to that of *imputans*, obscured by the colour lines, veins on clavus coalescing for one-third their length.

Colour: vertex white, washed with yellow, a crescent either side the point, a dash on the lateral margin and interrupted before the middle, brownish fuscous; face pale yellow, a narrow black line just under the margin of the vertex; pronotum yellow, with six dark brown stripes, the inner and broader pair arising behind the middle of the vertex, continuing across the scutellum; elytra yellow, with five light brown stripes on each side, interrupted by the light nervures, the reflexed veinlets broadly white, lined anteriorly with fuscous; below pale yellow.

Genitalia: ultimate ventral segment of the female half longer than the penultimate, the posterior margin angularly excavated one-third its depth, margins of the excavation near the centre slightly toothed and marked with black.

Described from three females; two taken from the Platte valley at Sneyder and Julesburg, Colo., and one from Kimball, Neb. This is a very distinct species, and though unquestionably a member of the reflex-veined Dectocephalids, still in face characters it recalls a *Platymetopius*, and in colour and ornamentation it might easily be confused with *Athysanus colon* or *texanus*.

#### A NEW SPECIES OF KERMES.

BY E. E. ROGUE, M. S., STILLWATER, OKLAHOMA.

*Kermes trinotatus*, n. sp.—Female scale variable in size, averaging about  $5\frac{1}{2}$  mm. long, 6 mm. wide, and  $4\frac{1}{2}$  mm. high; rounded above, somewhat flattened behind, convex beneath, front turned down into a more or less beak-like prominence; median groove obscure or broad and shallow; colour varies from bright argillaceous to dull gray; surface uniform, more or less conspicuously speckled with black; segmentation obscurely or plainly marked with dark spots. When the median groove is present it is crossed with more or less dark lines showing segmentation. There is a rounded dark spot on each side of the front, and an elongated dark blotch extending for a short distance above and below the anal opening: hence the specific appellation.

Larvæ  $416\ \mu$  long by half as broad; caudal setæ  $160\ \mu$  long; antennæ  $100\ \mu$  long, 6 jointed, formula (1, 2) (3, 4) (5) (6), 6 longest, 3 and 4 shortest, a few hairs towards tip; marginal spines conspicuous around the head, a prominent one each side of each caudal seta; claws of feet simple, slightly curved inward, accompanied by a few hairs. Abundant