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SOME NEW WESTERN LEAFHOPPERS OF THE FULGORID FAMILY ACHILIDÆ

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This interesting family of moth-like insects feeds, as far as known, in the nymphal stages at least, on fungi growing on decaying wood. One would naturally expect to find a group with such food habits largely confined to the forest regions of the humid East; instead they are much more numerous in species and diverse in form in the extreme Western and Southwestern regions. It is true that they are largely confined to the mountains of this region but a considerable number come from the chaparral or elfin forest type of cover of these mountains.

Epiptera shoshone Ball, n. sp.*

Form of henshawi but smaller and with shorter elytra; front dark brown and cream, mesonotum dark brown, elytra silver. Length 8 mm., width across folded elytra 4 mm. Vertex about quadrangular in the female, a little longer in the male, the apex slightly rounding; elytra resembling woodworthi in shape, even broader and shorter, the stigmal area without the two transverse veins of henshawi and the anal cell with two transverse veins instead of one as in that species.

Color, silvery iridescent, the vertex slightly orange with a dark border; pronotum griseus; mesonotum dark brown, almost black with three faint spots in a triangle at the apex; elytra silvery with a pair of dark spots on disc on either side, a longer one on the stigma and some irregular ones at apex; front rich creamy, the basal third dark brown or black, the band running back on the pleural pieces; clypeus and below smoky brown.

Holotype ? and allotype & Shoshone Nat. Forest, Wyo., Aug. 15, 1927 (H. H. Knight). The short broad silvery elytra renders this a strikingly distinct species.

Uniptera Ball, n. gen.

Resembling *Epiptera* in size and form but with a head more nearly like a *Catonia* of the *producta* group but less elongate. Strikingly distinct from these genera in the extremely ampliated costal area which is twice as wide across the middle of clavus as it is at the stigma.

^{*} All types in the collection of the author.

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Head small and inconspicuous, the eyes much flattened again the side of head as in *Epiptera pallida*. Vertex triangular, plateral carinæ slightly rounding to the apex, the base deep angularly excavated so that its median length scarcely equals the basal width; median carina broad and tumidly elevated posterioriforming a fovea on either side. Front extremely long and narrounly slightly widening towards the truncate apex, two and one half times as long as its apical width, the front and clypeus elevated from face. In profile very convexly rounding with a very obtuse angle with the vertex above instead of flat with an acut angle as in *Epiptera*. Pronotum very small and narrow, not quit twice the width of the eyes and less than half as wide as the distance across the closed elytra; very short scarcely more than collar except for the tumid, triangular central tablet which extending to the excavated head. Elytra very broad in front, roundingly

Type of the genus Uniptera ampliata n. sp.

stigma set off by two oblique nervures.

Uniptera ampliata Ball, n. sp.

narrowing behind. Venation simple, resembling Epiptera, the

Superficially resembling a small pale Flatoides punctata but without the transverse veins along costa. Still more closely resembling Œcleus snowi but with a widely different head and elytra overlapping posteriorly. Broad and short with a narrow head, pale creamy with three black points in a transverse line just before the forks of the primary nervures on each elytron. Length & 8 mm., width 3.5 mm.

Structure of the genus; pronotum almost straight along the posterior margin, the lateral carinæ following the margin of the triangular projection. Mesonotum extremely short and broad, the lateral carinæ distinct, the median one obscure. Costal area of elytra occupying over one-third the breadth at the widest part opposite the rows of dots, then rapidly roundingly narrowing in front and slowly and regularly narrowing posteriorly to the broad stigma.

Color: Vertex and face creamy tinged with orange especially around the eyes; rest of dorsum pale creamy the nervures concolorous, a black spot outside the claval suture just in front of the fork of the cubitus, a second spot outside the medius and just before the subcosta-radius fork, a third equidistant spot in the same line in the costal area. Below pale, the venter smoky; underwings slightly smoky.

Holotype, male (labeled) Pasadena, Calif. Taken by the author from an Arctostaphylos on the lower portion of the trail

up Mt. Wilson, June 21, 1909. This is such a strikingly distinct and interesting form that it warrants description from a single sex.

Catonia fumida Ball, n. sp.

Resembling maculifrons and lineatocollis but longer, narrower, and less maculate. Dark smoky with light carinæ and nervures in sharp contrast. Length 5 mm.

Vertex about as in maculifrons slightly longer than wide, narrowing apically, meeting the front in a definite carinate angle, front proportionally much narrower than in maculifrons. Elytra proportionally much longer and narrower, definitely narrow and parallel-margined in repose. Male abdomen with a triangular apical projection as long as its basal width and one-third the length of the ear-like plates.

Color, almost uniform dark smoky above with the carinæ, the posterior margin of pronotum, a pair of stripes between the carinæ on mesonotum and the nervures white, in sharp contrast. Face and below creamy or old ivory; a broad apical and three narrow basal bands on the front widely separated into spots by the elevated median carinæ, black.

Holotype, female, allotype, male, and two pairs of paratypes. Huachuca Mts., Aug. 2, 1931, a female Sabino Canyon, July 14, 1932, and a male (labeled) Tucson, Sept. 1, 1929. All taken in the mountains of southern Arizona by the author. From maculifrons this species may be readily separated by the long uniform colored elytra, the narrow face and the fact that the upper bars on the front in that species tend to coalesce while in fumida they are reduced to small distinct spots. The long tapering apical projection in the male will separate it from both lineatocollis and maculifrons where this projection is broader than long and truncate.

Catonia arbutina Ball, n. sp.

Resembling nava in size and form, broader than bicinctura, much darker than either. Fuscus brown with white maculations and cross nervures. Length of $\,^{\circ}$ 5 mm.

Vertex slightly more acutely carinate than in nava with correspondingly larger lateral foveæ. All carinæ of dorsum and the the pattern of nava, the fork of the subcosta widening apically claval veins much elevated, acute. Elytra with the venation of

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BALL-NEW ACHILIDÆ

and obliquely truncate. Male abdomen ending in a long bifurcate process that is shorter and broader than in nava and the plates are not as long or as strongly oblique.

Color, dark smoky brown, the lateral portions of pronotum white with four black spots, the nervures interrupted with white, the cross nervures white and the costal margin pale interrupted with quadrate dark areas. Front dark brown or black with a definite parallel margined white band.

Holotype, female, allotype, male and two female paratypes, taken in the Santa Rita Mts., Sept. 29, 1929 (labeled Tucson), one female Chiricahua Mts. Aug. 23, 1932, and one female Huachuca Mts. Oct. 9, 1932. All taken high in the mountains of southern Arizona by the author. The dark color alone will separate this from the others of the nava group.

Catonia indella Ball, n. sp.

Resembling succinea in form and structure; smaller with a narrower vertex, dark smoky brown with three light areas on dorsal line. Length female 6 mm.

Vertex distinctly narrower than in succinea, each lateral tablet nearly twice as long as wide, the pronotum slightly shorter than in succinea; the lateral carinæ definite and parallel instead of widely diverging and becoming obscure as in that species. The central tablet even narrower than in producta, narrower than the mesonotal tablet which is slightly expanded posteriorly. Elytra extremely long and slender, the outer claval nervure tied to the suture near the middle and twice at the posterior angle as in producta, the nodal cell an elongated egg-shape as in succinea. Front long and narrow, the sutures between front and clypeus strongly oblique near the margin then obscure.

Color, dark smoky brown above with the carinæ light. The front creamy above shading out to smoky on clypeus and black below. A pair of round black spots on the lateral foveate areas above. Pronotum with the central tablet dark, the rest pale with four black spots on each side. Apex of mesonotum and an area adjoining, pale, including the ivory bases of the inner claval nervures, the apices of the outer clavals, an area on the inner clavals and the membrane between, ivory white. The cross nervures apically ivory white and an area beyond clavus pale.

Holotype, female, taken in mountains above San Louis Obispo, Calif., June 22, 1931, by the writer. This is strikingly distinct in color and while it belongs with *producta* in having the narrow pronotal tablet its vertex is much shorter.

Catonia brunnella Ball, n. sp.

Resembling rubella in form and structure. Longer, darker, with an extremely long pronotum. Smoky testaceous, the slightly hyaline elytra with smoky apical spots. Length female 6 mm., male 5 mm.

Vertex scarcely as long as wide but little longer than the pronotum, base of front extending beyond vertex especially at sides, front short, much narrower than in rubella, short, convex, conically pointed, highly polished, with the lateral margins parallel. Pronotum very little produced between the eyes, very long, twice the length in rubella, the lateral margins longer than on the median line but lacking the sulcus of Epiptera. Elytra not as long and narrow as in indella but longer than in rubella and its allies; venation similar the nodal cell much longer and lacking the triangular division at base. Male abdomen with an attenuate triangular median projection that is longer than the ultimate segment and two-thirds the length of the widely separated strapshaped plates that are apically rounded and beset with coarse hairs.

Color, uniform, light smoky brown, the face and carinæ unicolorous, nervures a trifle darker, a smoky band around apex of elytra broken into spots by the light margined apical nervures.

Holotype, female, Huachuca Mts. Oct. 9, 1932, allotype, male, and paratype male taken in the Santa Rita Mts. (labeled Tucson) Sept. 29, 1929; all taken in Arizona by the writer. This is a strikingly distinct species in the extremely long pronotum and the male genitalia. It is near the body color of necopina but more than twice its size.

Catonia constellata Ball, n. sp.

Resembling necopina in form and color, slightly broader. Pale cinnamon the nervures bordered with ivory dots. Length 4-4.5 mm.

Head including eyes a half circle, the sharply carinate vertex not reaching the apex. Vertex broader than long. Front convex slightly conical, highly polished, carinate towards apex, slightly expanded apically with the lateral carinæ almost foliaceous. Pronotum short, not over half the length of head as in necopina. Elytra broader than in necopina or costata with a simpler venation and a long stigma. Male abdominal projection about equilaterally triangular, the apex bluntly rounding, less than half as long as the ultimate segment. Plates broadly, obliquely spoonshaped.

Color, pale, cinnamon, the pronotum and head paler. Longitudinal nervures concolorous, bordered with ivory dots or irregular transverse dashes; cross nervures ivory.

Holotype, female, allotype, male, and one female paratype taken by the writer at Colfax, Calif., June 8, 1909. Strikingly distinct in this group by the ivory dots.