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A VARIETY OF BASILARCHIA ARCHIPPUS.

BY JOHN H. COOK AND FRANK E. WATSON, ALBANY, N. Y.

Basilarchia archippus, new variety, *lanthanis*. *—Differs from *archippus* proper in that the extramesial black stripe crossing the secondaries is, on the upper surface, subobsolete.

The type specimen (Pl. 5, fig. 2) was taken at Albany, N. Y., in June, 1902. The paratype, illustrated (fig. 1), came from Hudson, N. Y. These butterflies are representative of a series of twelve, eleven of which are still in the possession of the authors. More than a score of others have been seen within the last ten years, and intergrade forms are common.

While in general opposed to the practice of designating a form as a variety merely because it differs more or less strikingly from an arbitrarily assumed norm, we have considered that in the present instance an exception should be made. The value of a name is measured by its usefulness, and should *lanthanis* prove to merit the attention of no one but the catalogue-maker, it will be justly ignored. If, however, the loss of the black stripe is a logical step in the evolution of the wing design of *archippus*, whereby its mimicry of *Anosia plexippus* becomes more complete, the existence of this variety may be a fact of more than ordinary biological interest.

The problem which the species presents will be discussed in a paper soon to appear in the Proceedings of the Entomological Society of London, and as a distinctive name for the stripeless variety will facilitate that discussion, it was thought advisable to publish this brief description in advance.

SOME NEW NORTH AMERICAN JASSIDÆ.

BY E. D. BALL, LOGAN, UTAH.

Phlepsius attractus, n. sp.—Resembling *floridanus*, but with an evenly rounding vertex and a smaller number of spots on the costa. Length, ♂ 4.25 mm.

Vertex twice wider than long, scarcely half the length of the pronotum, margins parallel, the anterior one rounding evenly to the front

**λανθάνω*.—I escape notice.

through its entire length. Front regularly tapering to the wedge-shaped clypeus. Pronotum set into the head as in *floridanus*.

Colour: Vertex pale creamy, an oval brown spot on either side the disc connected to the posterior margin by a line. Pronotum and scutellum milky, sparsely mottled with brown. Elytra milky, sparsely reticulated with brown, a few darker spots along the margin, and number of milky spots on the disc. Face finely irrorate with pale tawny.

Genitalia: Male valve broad and short, bluntly rounding; plates small, margins slightly concave, their rounding apices upturned, about three times the length of the valve. Disc of the plates ivory-white, polished.

Described from two males from Florida, from Mrs. Slosson. This species approaches *costomaculatus* in the shape of vertex and the lack of dark ornamentation, but is quite distinct in other characters.

Phlepsius floridanus, n. sp.—Resembling *irroratus*, but smaller, form of *pulchripennis*, but with a longer vertex and about seven spots on costa. Length, ♀ 5 mm.

Vertex twice wider than long, half the length of the pronotum, a trifle longer on middle than against the eye, disc almost flat, margin rounding to front except for the slightly conically-produced apex, front broad above, almost regularly narrowing to the clypeus. Pronotum long, more than half its length within the curve of the head. Elytra long, appressed, venation as in *irroratus*.

Colour: Vertex coarsely irregularly inscribed with tawny brown, a circle around each ocellus, a spot on the apex of vertex, a dash on either side, a crescent on the disc connected with the apex by a line and four points on the posterior margin ivory-white. Pronotum obscurely mottled with brown and white. Scutellum soiled yellow, with three ivory points. Elytra milky, sparsely but rather evenly reticulate with tawny, about seven dark spots along costa. Face finely irrorate with tawny, a few spots above and short arcs below ivory-white.

Genitalia: Female segment rather long, rounding posteriorly, with a pair of small rounding lobes on the median fourth.

Described from a single female from Biscayan Bay, Florida, from Mrs. Annie Trumbull Slosson. This species is intermediate in character between the *costomaculatus* group and the regular Phlepsids, but probably belongs with the former.

Phlepsius tubus, n. sp.—Resembling *fuscipennis*, Van Duzee, but smaller and stouter, with a narrower vertex and more of a tawny fulvous shade. Length, 5.25 mm.

Vertex rather narrow, slightly longer than in *fuscipennis*, parallel-margined and slightly depressed. Anterior margin merged with front, except for a slight production at apex. Front broad and short as in *fuscipennis*. Pronotum slightly wrinkled in the female, distinctly so in the male. Elytra broad and slightly flaring.

Colour: Vertex, pronotum and scutellum fulvous, irrorate with tawny, the posterior disc of pronotum and a cloud on scutellum darker. Scutellum with the tip and a pair of lateral spots ivory-white, the lateral spots pointed behind and exceeding the line of the margin. Elytra finely reticulate and slightly irrorate with tawny. A few irregular darker spots on the margin and paler ones on disc. Face finely irrorate with pale tawny, without markings.

Genitalia: Female segment broad and rather short, posterior margin divided into four evenly rounding lobes equal in length, the median pair slightly broader than the lateral ones, and black margined, median cleft slightly deeper than the lateral ones. Male: valve long, triangular, plates strongly gibbous at base, margins slightly narrowing to the broad, roundly truncate tips; together forming a broad blunt-tipped spoon, scarcely as long as its basal width, and only equalling the tubularly inflated pygofers.

Described from a single pair taken at Washington, D. C. This species, *pusillus*, and the following one connect the *Uhleri* group with the more typical *Phlepsids*.

Phlepsius utahnus, n. sp.—Resembling *pulchripennis*, but smaller, lighter coloured, and with a longer, narrower vertex. Length, ♀ 5 mm.; ♂ 4.5 mm.

Vertex obtusely triangular, as long as the basal width, and almost as long as pronotum, one-third longer on middle than against eye, disc flat, margin bluntly rounding to the front. Front long, narrow and parallel-margined above, narrowing below to the slender parallel-margined clypeus. Elytra long and narrow, venation obscure and somewhat irregular.

Colour: Vertex yellow, ocelli and four points on anterior margin tawny or brown; disc with a large black spot, concave in front except for a triangular incision on the median suture, pointed behind where it reaches the base, the surface finely irrorate with yellow. Pronotum irregularly irrorate with brownish fuscous. Scutellum yellow, a pair of quadrate reticular areas inside the basal angles and a pair of round dots against apex, black. Elytra milky, the nervures pale tawny, surface

irregularly irrorate and sparsely reticulate with brownish-fuscous. The reticulations are gathered into several more or less definite spots along posterior half of costa and one in the inner anteapical cell. The clavus and adjacent parts of corium with a number of irregular translucent ivory-white areas. Face finely irrorate in the male, sparsely so in the female.

Genitalia: Female segment short and truncate, slightly medianly carinate, pygofers short and stout; male: valve long, roundly pointed, the lateral margins concave at base, plates together equilaterally triangular, twice the length of the valve.

Described from three specimens from "Chads," Utah. A male from Arizona and a female from California probably belong here, but are not in shape to definitely determine.

Phlepsius tigrinus, n. sp.—Resembling *tubus* and *Uhleri*, but larger and darker. Tawny brown, with sparse reticulations on elytra. Length, ♀ 6 mm.

Vertex three times wider than long, slightly sloping, the posterior margin elevated, anterior margin rounding in front, almost parallel with posterior one; apex scarcely produced. Front broad, the margins almost straight. Pronotum smooth. Elytra moderately long, distinctly flaring.

Colour: Vertex tawny fulvous, pronotum tawny brown, with the anterior margin shading to the colour of the vertex, and the disc irrorate with milky white. Scutellum pale yellow, the basal angles irrorate with tawny, and the apical third shading to ivory-white. Elytra very sparsely reticulate and closely, finely irrorate with tawny. The irrorations omitting a few irregular areas.

Genitalia: Female segment broad and short, about twice the length of the preceding, the posterior margin slightly emarginate, with the median third weakly produced and dark margined.

Described from a single female from Washington, D. C. This species shows traces of the banding of *Uhleri*, but is easily separated by the larger size and distinct genitalia.

Eutettix (Mesamia) illumina, n. sp.—Short, stout, black, with a hyaline band before apex of elytra. Length: ♂ 4 mm.

Vertex hardly twice wider than long, anterior margin slightly more rounding than posterior, disc slightly sloping to the definite anterior margin. Front convex, broad above, margins straight, narrowing to

clypeus. Pronotum finely wrinkled, elytra moderately long, widely flaring at the apices, venation obscure at the base, central anteapical cell irregularly reticulate. Male: valve small, triangular; plates triangular, twice the length of the valve.

Colour: Deep shining black; a narrow line on the vertex margin ivory-white, a band across the elytra before the apices, including the apex of clavus and bases of the four apical cells, milky hyaline, this band broken into irregular, more or less oval spots by the black nervures, the largest spot being in the fourth apical cell. Below black, the legs creamy yellow, dorsal surface of posterior pair lined with black.

Described from a single male from Arizona. In structure this species seems to be intermediate between the *nigrodorsum* and *vitellina* groups, so does not fit well in either. In colour it is far removed from anything in the genus.

Eutettix (Mesamia) animana, n. sp.—Form of *Johnsoni* nearly, smaller and darker, with the nervures distinct. Length, ♂ 5 mm.

Vertex with the disc flat, anterior margin a trifle more curved than the posterior, passage to front more rounding than in *Johnsoni*, front as in that species. Elytra long, slender, appressed, venation distinct, the second cross nervure often rudimentary or wanting, central anteapical cell long, constricted in the middle.

Colour: Vertex creamy yellow, six black dashes in pairs on the anterior margin, pronotum mottled with milky and brown, yellowish in front. Scutellum creamy yellow, transverse impressed line black. Elytra subhyaline, faintly washed with tawny brown, nervures brown, becoming darker on the costa; a pair of oval, milky-white spots beyond the middle of the clavus. Face dirty yellow, a spot above the antennal ledge and a broken line in front, just beneath the vertex margin, black.

Genitalia: Male, valve large, triangular, with apex blunt, plates rapidly roundly narrowing for half their length, then gradually tapering to the rounding points, apical portion convex in both diameters.

Described from a single male taken at Animas, near Durango, Colorado, by the writer. It is intermediate in appearance between *feneestrata* and *Johnsoni*, but quite distinct in structure from either.

Eutettix (Mesamia) aurata, n. sp.—Form of *Johnsoni* nearly, smaller and paler. Golden yellow, without definite markings. Length, ♀ 4.5 mm.

Vertex slightly sloping, almost parallel-margined, passage to front slightly rounding. Front broader at base than in *Johnsoni*. Elytra

moderately long and slender, venation indistinct. Female segment short, the posterior margin in the form of an obtusely angled triangle, with the apex slightly produced, the pygofers short and stout.

Colour: Pale golden-yellow, the elytra coriaceous and uniform in shade with the rest of the body. The anterior margin of vertex with an ivory line, behind which there are faintly indicated in brown the six points usual in this group. Face and below yellow, traces of alternate light and brown arcs on disc of front.

Described from a single female from Washington, D. C. This is by far the smallest member of this subgenus, and will be readily recognized by its uniform golden colour and distinct genitalia.

Eutettix amanda, n. sp.—Form of *Mildredæ* nearly, smaller, paler, with oblique brown markings on elytra. Length, ♀ 5 mm.

Vertex convex, margin rounding to front except at the apex, which is bluntly conically pointed. Front narrower than in *Mildredæ*, margins sloping directly into clypeus. Female segment moderately long, posterior margin rounding, median fifth slightly excavated, with a broad blunt tooth exceeding the margin by half its width.

Colour: Vertex creamy, with two irregular oval spots on the disc pale tawny. Pronotum milky, clouded with pale greenish fuscous, except for a broad median stripe, which becomes ivory-white on the scutellum, where it includes all but the brown basal angles. A transverse brown dash inside and behind either eye, with a line extending in towards the centre of the pronotum. Elytra pale, with a faint brown wash, and heavy brown or fuscous markings, as follows: the scutellar and sutural margins of clavus before the middle, the apex of clavus, a spot near base of corium, an oblique dash before the middle in line with the apex of clavus, a transverse band on second costal nervure, and a cloud on the apex. All of the brown markings, except at base and apex, are irregularly margined with ivory-white. Face dirty yellow, pygofers castaneous.

Described from a single female from Arizona. This is a new and quite distinct addition to the handsome species of this group.

Scaphoideus Catalinus, n. sp.—Form of *blandus* nearly, smaller, and with a shorter vertex. Tawny yellow, with two white bands on elytra. Length, ♀ 4 mm.

Vertex roundly rectangular, as long as its basal width, and almost equalling the pronotum, disc flat or slightly depressed. Elytra short, stout, Platymetopius-like in form and venation, second cross nervure

present, and a number of reflexed veinlets to the costa. Female segment short, lateral angles rounding, posterior margin rounding, with a deep, narrow, median slit extending almost to the base.

Colour: Vertex and pronotum lemon-yellow, a pair of faint stripes adjoining the median line on disc of vertex, and a few milky irrorations on disc of pronotum. Scutellum orange, with three ivory points on apical portion. Elytra milky, washed with pale brown, omitting a definite band across the second cross nervure, and an irregular broader one before apex. Nervures brown, shading to black on the white bands, and reflexed veinlets.

Described from a single female from near the Catalina mountains, in Arizona. In venation and general appearance this species approaches the genus *Platymetopius*, but it lacks the structure of vertex and front found in that genus, and seems more closely related to *blandus* and its allies.

Scaphoideus pellucidus, n. sp.—Size and form of *blandus* nearly, darker, and with a much longer vertex. Length, ♀ 5.75 mm.; ♂ 5 mm.

Vertex strongly, acutely angular, the margins straight, and the disc flat or slightly depressed, distinctly longer than the pronotum. Head, as seen from the side, with the vertex margin produced and foliaceous. Front concave above, convex below, broad above, margins angularly narrowing to the antennæ, then gradually sloping to the constricted clypeus. Elytra long and slender, venation obscure, spaces between the nervures and along the margins irregularly divided by cross nervures and pigment lines.

Colour: Vertex lemon-yellow, the margins before the eyes and the median line narrowly white and closely lined with black, usually a pair of broad sanguineous stripes outside the median black ones, and often extending across the pronotum in highly-coloured specimens. Pronotum olive-brown on disc, mottled with milky, anterior margin shading to yellow. Elytra washed with iridescent olive brown, becoming fuscous toward the apex and costa. Whole surface interspersed with numerous irregularly oval pellucid spots in sharp contrast.

Genitalia: Female segment moderately long, posterior margin rounding, with the median fourth roundly produced and semicircularly notched; male: valve obtusely triangular, plates gibbous at base, then triangularly produced, with the apices acute.

Described from eight examples from Stanford and Colfax, California. The foliaceous vertex renders this a strikingly distinct species in the genus.

Scaphoidens scrupulosus, var. *reductus*, n. var.—Form of *scrupulosus*, but smaller, and entirely lacking the brown banding of that species. Length, ♀ 4.5 mm.

Vertex pale creamy, with a pair of large quadrate spots on the disc, separated by their width and connected by a line along the margins to a pair of round spots against the eyes, black. Pronotum milky, mottled with fuscous. Elytra milky, finely and uniformly reticulate with fuscous, apical cells black, with ivory spots at base. Female segment more rounding than in *scrupulosus*, with a shallower notch and a long strap-shaped tongue extending two-thirds its length beyond the segment.

Described from three females from Colfax, California. The specific limitations in this genus are very difficult to determine. A study of a larger series may prove this to be a distinct species, but the present material will hardly warrant its recognition.

DISSECTING SMALL BEETLES.

Prof. Wickham's article in the January issue of this magazine on "The Preparation of Beetles for the Microscope," is an excellent one, which, had it appeared ten years ago, would have saved to many of us a great deal of trouble and spoiled specimens.

In connection with this subject I should like to say a few words about my method of dissecting very small beetles of the Staphylinid subfamily Aleocharinæ.

I do not dissect the specimens first, and do not subject them in parts to the effects of the different fluids, but put the whole specimens in alcohol, then in concentrated carbolic acid solution, then in oil of cloves. The specimens go from the last named medium on a cover-glass; there I first cut the head off and transfer it to the cover-glass of the permanent mount, where, with very fine needles, the parts of the head are dissected and placed in proper position.

The prothorax and front legs are then transferred similarly to another cover-glass, and finally the meso- and metasternum (minus wing-covers and wings) to a third cover-glass, sometimes the abdomen to a fourth glass.

As dissecting instruments I use two steel needles, which are fastened in handles and then sharpened under the hand-lens. They are sharpened so that they represent a miniature double-edged flat scalpel with very sharp point.—A. FENYES, Pasadena, Cal.