

# DESCRIPTIONS OF NEW SPECIES OF SOUTH AMERICAN GEOMETRID MOTHS.

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Of one hundred specimens submitted to me for determination by Mr. William Schaus, the following proved to be new to science, and they are accordingly characterized herewith. The types have been placed in the collection of the U. S. National Museum by Mr. Schaus.

Subfamily MECOCERATINÆ.

POLYSEMIA DIVECTA, new species.

*Fore wing*.—Wood brown, freckled with darker brown; costal area above subcostal vein with some rough pale green scales to middle; lines and scale tufts blackish; first line from one-third of costa, bluntly rounded in cell close before the large vertical discal tuft, acutely angled basewards on submedian fold, almost touching the long basal scale tuft, again angled outwards just above submedian vein, then oblique inwards to about one-sixth of inner margin; outer line from two-thirds of costa oblique outwards, bluntly angled on veins 6 and 4 and deeply incurved between, bluntly rounded basewards nearly beneath the discal tuft on submedian fold and sharply angled outwards above submedian vein, to three-fifths of inner margin, preceded in its lower half by a slight brown shade which is inwardly limited by a fine, more or less parallel line, which above vein 4 is obscurely rounded inwards to a black costal streak above the discal tuft; submarginal line formed of pale interrupted wedge-shaped marks, inwardly filled in with darker scales, between 4 and 6, preceded and followed by black scaling; a row of black marginal lunules; fringe brown, with inner half darker.

*Hind wing*.—Without basal line; two antemedian diffuse brown parallel lines, sharply dentate on veins; outer line black and distinct, acutely dentate on vein 6, thence nearly straight to inner margin at two-thirds, preceded below vein 6 by a thick brown shade; a row of diffuse pale submarginal lunules, preceded by larger brown



lunules; the marginal black lunules slightly edged with whitish; discal tuft slight, linear and black, with paler scales on each side.

Under side grayish or brown, striated with fuscous, the outer half of both wings suffused with dull reddish; cell spots linear, velvety black, smaller in hind wing; three submarginal dark blotches, at costa, beyond cell, and at anal angle; inner margin of fore wing below median dull gray to middle.

Head, thorax, and abdomen like wings; face, bluntly prominent, with two dark streaks; shoulders dark brown; patagia much paler; abdomen with dark segmental rings; palpi with first and second segments externally velvety brown; abdomen beneath and legs pale.

*Expanse of wings*.—44 mm.

*Locality*.—One male from St. Laurent, Maroni River, French Guiana. September, 1904.

Distinguished by the straight outer line of hind wings. I have seen four specimens from Rio Demerara; *P. stigmata* Walker, (*Boarmia*) to which it is most closely allied, is smaller (34 mm.), and has the line of hind wing twice distinctly angled.

*Type*.—Cat. No. 11383, U.S.N.M.

POLYSEMIA ILLINEATA, new species.

Differs from *P. calvina* Druce as follows: The ground color of the wings is pale olive green, instead of dark; the veins are all pale ochreous, with short brown transverse striolæ, instead of pink; the two lines instead of being dark and clear through their pink edging, are gray, regularly lunulate-dentate, but obscure and without pale edging of any sort, the outer line being also preceded by an equally indistinct gray line; all three rise from distinct dark brown costal spots, absent in *calvina*, the first shortly before the discal tuft and therefore farther from the base; the submarginal line is bluish white, not pink; the basal and discal tufts are red brown instead of green and pink; the outer line is marked by distinct dark dashes on the veins, especially clear in the hind wings. The under sides and the bodies show little difference.

*Expanse of wings*.—Female, 52 mm., slightly larger than in the same sex of *calvina*.

*Locality*.—One female from St. Jean, Maroni River, French Guiana. April, 1904.

Over and above the differences manifest in color and markings it is noticeable that the radial of the hind wing runs out into a small but distinct tooth, which is quite absent in *calvina*.

*Type*.—Cat. No. 11384, U.S.N.M.



## Subfamily ORTHOSTIXINÆ.

## ZANCLOPTERYX CONSPERSA, new species.

*Fore wing*.—Whitish gray, densely speckled with fuscous, the speckles in places forming striæ; the extreme hind margin with a brownish-gray suffusion; the two lines marked by dark gray spots on veins; first from two-fifths of costa to one-third of inner margin, slightly curved in cell; second from three-fifths of costa, oblique outwards to vein 6, then sinuate inwards to two-thirds of inner margin; a slight dark cell spot; a row of distinct dark marginal spots; fringe gray brown.

*Hind wing*.—Whiter, the speckling also fainter; the lines clearer; the antemedian thick and blackish gray, the postmedian faint and sinuous. Under side with the speckling coarser and thicker, more coalescent; both wings with sinuous dark outer line, the dark inner line of hind wings showing through from above; cell spots small and black.

Head, thorax, and abdomen whitish gray, like wings.

*Expanse of wings*.—27 mm.

*Locality*.—One male from Castro, Parana, southeast Brazil.

The fore wings have the apex produced and acute; all the previously known species of the genus are white.

*Type*.—Cat. No. 11385, U.S.N.M.

## Subfamily HYDRIOMENTINÆ.

## ANAPALTA INCISA, new species.

*Fore wing*.—Olive fuscous; the lines and shadings blackish; basal patch slight, its edge waved and vertical, blackish, at one-fifth; inner edge of central fascia slightly angled inwards on cell fold and outward on submedian fold, at one-fourth, the band preceding it pale olive ochreous, without any dark dusting; outer edge at two-thirds, oblique outwards and forming a slightly bidentate projection above and below vein 6, deeply incised above vein 5, and again projecting with two strong teeth between 4 and 2; the fascia is traversed by three or four waved dark shades alternating with paler ones; all the lines from base to outer edge of fascia rise from the subcostal vein, the costal area being pale except at extreme edge; submarginal line pale and waved, the lunule between 3 and 4 being broader and paler than the others, preceded above middle by a blackish cloud and followed beyond cell by a dark shade; a black interrupted marginal line; fringe fuscous, checkered with paler; cell spot blackish, indistinct.

*Hind wing*.—Uniform olive fuscous, with traces of a middle and outer line; fringe paler. Under side dull olive ochreous, yellower in the hind wing; the markings obscure.



Head, thorax, and abdomen olive fuscous.

*Expanse of wings*.—26 mm.

*Locality*.—One female from São Paulo, southeast Brazil.

The insect when fresh is probably greener.

*Type*.—Cat. No. 11386, U.S.N.M.

ORTHONAMA? ALBESCENS, new species.

*Fore wing*.—Dull cream color, crossed by a succession of faint gray lines, all running oblique and parallel to outer margin, slightly darker marked on the veins; costa marked with fine gray dots and atoms; marginal area beyond the outer edge of central fascia clear, with a submarginal row of gray dots on the veins; fringe with two dark gray lines and five black dots at base.

*Hind wing*.—With the lines hardly indicated and a small dark cell spot as in fore wing. Under side, especially of hind wing, with coarse rufous scaling; the postmedian lines on each wing diffusely dark; cell spots distinct.

Head, thorax, abdomen above and below, and legs, dull rufous ochreous.

*Expanse of wings*.—28 mm.

*Locality*.—One female from Colombia.

Both fore and hind wings are somewhat produced at apex; the fore wing with outer margin oblique and slightly curved.

*Type*.—Cat. No. 11380, U.S.N.M.

GRAPHIDIPUS FUMILINEA, new species.

*Fore wing*.—Whitish gray, dusted and clouded with darker; base whiter with three black marks, one on costa and inner margin, the third at base of cell; a double blackish antemedian line, acutely angled outwards on the folds and inwards on the veins, the outward angles especially distinct, accompanied by a smoky transverse cloud; postmedian and submarginal lines strongly lunulate-dentate, the teeth all pointing inwards; veins of the median area marked with black scales; the discocellular also black; marginal area smoky gray, with dull pale spots at the ends of the veins; fringe (worn) mottled gray and dark.

*Hind wing*.—Semitransparent whitish, with a gray marginal border; veins finely dark, with a row of black submarginal dashes; fringe pale. Under side dirty whitish gray, with the veins dark, except in marginal area. Face white, with a black spot above; patagia white with a black basal spot (thorax damaged); abdomen white, tinged with gray; palpi and legs black with the joints white.

*Expanse of wings*.—48 mm.

*Locality*.—One female from Colombia. This seems a very distinct species.

*Type*.—Cat. No. 11381, U.S.N.M.



## CENOTHALIA RUFARIA, new species.

*Fore wing*.—Dull brick red, with dense finely darker striae; a dark cell spot, followed on vein 5 by a small yellowish patch; there are traces of an outer line marked by black and white dots on the veins; fringe concolorous.

*Hind wing*.—The same, but without any yellow spot. Under side dull yellowish gray, speckled with rufous; the fore wing redder toward outer margin.

Head and thorax rufous (abdomen wanting); antennae strongly bipectinate.

*Expanse of wings*.—30 mm.

*Locality*.—One male from Rio Janeiro, Brazil.

*Type*.—Cat. No. 11382, U.S.N.M.

## PHELLINODES MEGALOPHYSA, new species.

*Fore wing*.—Gray with a brownish tinge, thickly vermiculated with darker; costa with more distinct dark striae, especially at base; apical portion of wing beyond cell above vein 4 smoky fuscous, containing a subquadrate snow-white blotch between veins 5 and 7, around which the shading is blacker, while above it the costal area remains of the paler ground color; obliquely above the outer corner of the white blotch are two minute white dots; immediately beyond the cell above vein 4 is a diffuse black spot; fringe brownish from apex to vein 5, pale gray below.

*Hind wing*.—Like fore wing in ground color, without markings; costal area without darker freckling; outer margin diffusely darker. Under side whiter, with the freckling darker and coarser; inner half of fore wing below the cell fold to near anal angle blurred gray; the white blotch with a grayish ochreous space above it along costa.

Head, thorax, and abdomen dull gray; palpi fuscous; pectus and legs whitish.

*Expanse of wings*.—44 mm.

*Locality*.—A pair from St. Jean, Maroni River, French Guiana.

*Type*.—Cat. No. 11377, U.S.N.M.

## HAMMAPTERA OBNUBILATA, new species.

*Fore wing*.—Dull olive green, traversed in basal two-thirds by dark fuscous coalescent lines, all but obliterating the ground color, the edges of the band between basal patch and central fascia being somewhat more evident; outer edge of fascia projecting beaklike on vein 4, followed by a cream-colored band suffused with pale green; beyond this pale band the terminal area is a mixture of dark green and pink, with diffuse blackish blotches at costa, beyond cell, and



above inner margin; space between veins 3 and 4 pale green, running out into the darker green fringe, which is checkered with black beyond the pairs of black spots which stand at the extremity of the veins.

*Hind wing*.—Dull yellowish white; the inner margin dark, showing the commencement of lines; fringe yellowish white, becoming gray toward anal angle, where there are also some black marginal spots.

Under side of fore wing cream color, with the dark shades blackish; space between veins 3 and 4 pale, joining the pale band beyond the fascia; apex pale; hind wing yellowish, with an interrupted dark marginal border and traces of lines; cell spots dark on both wings.

Head, thorax, and abdomen grayish ochreous; patagia, metathorax, and basal segment of abdomen greenish fuscous; dorsum blackish, with paler segmental rings; palpi and legs dark, with pale joints.

*Expanse of wings*.—39 mm.

*Locality*.—One male from Ecuador.

*Type*.—Cat. No. 11378, U.S.N.M.

HAMMAPTERA VILARIA, new species.

*Fore wing*.—Dirty whitish; the markings dull black; the whole surface having a slightly furry appearance; basal patch and center of the following band dark gray; central fascia blackish, containing pale spaces at costa and on inner margin; its inner edge indented at middle, the outer incurved beyond cell, with slight teeth below costa and two larger ones between 2 and 4; the pale band following with a dull greenish central line; presubmarginal shade blackish from costa to vein 4, gray and indistinct below; submarginal line indistinct, marked in the costal half by whitish spots; pairs of black marginal spots at the vein ends; fringe dark gray.

*Hind wing*.—Dull white, with black marginal dots and traces of submarginal line; under side of fore wing black, with the band beyond central fascia from costa to vein 4 and the whole area below it whitish; hind wing white, with black speckling; cell spots visible on both wings. Face and vertex whitish; thorax and abdomen dull gray; palpi black.

*Expanse of wings*.—30 mm.

*Locality*.—One male from Ecuador.

*Type*.—Cat. No. 11379, U.S.N.M.

HAMMAPTERA SPATIOSATA, new species.

*Fore wing*.—Greenish gray, finely dusted with dark atoms; basal patch, central fascia, and marginal area dark gray, the lines black; intervals between basal patch and central fascia and between fascia



and submarginal line broadly greenish gray, without markings; basal patch quite small, edged by a black line; central fascia narrow, constricted on submedian fold, its inner edge outcurved between subcostal vein and submedian fold; its outer acutely projecting below vein 4 and insinuate on each fold; the veins across it partially black; cell spot black in a paler space; the usual pale band and following dark line beyond fascia expressed only at costa; submarginal line wavy, pale, preceded by slight dark clouds at costa, beyond cell, and on submedian fold; pairs of black marginal spots at the vein ends; fringe concolorous.

*Hind wing*.—Gray, with dark cell spot, fine outer line and dark gray marginal shade beyond a paler curved band; fringe pale gray with dark spots at veins. Under side ochreous washed with dark gray, except in the upper half of the pale band beyond central fascia, which is pale and unspeckled; fore wing with outer acutely angled black shade and quadrate black apical patch fading out below middle, the margin at apex and between 3 and 4 paler; hind wing with narrow submarginal border and dotted outer line; black cell spots in both wings.

Head, thorax, and abdomen gray green.

*Expanse of wings*.—34 mm.

*Locality*.—One male from Ecuador.

*Type*.—Cat. No. 11388, U.S.N.M.

HAMMAPTERA SUBNOTATA, new species.

*Fore wing*.—Pale green; the lines and shades all darker green; four dark green bands are conspicuous; the first narrow and curved, forming the edge of basal patch; second and third forming the limiting bands of central fascia, the outer wider, projecting at veins 6 and 4 and lunate-edged throughout; the fourth the presubmarginal shade, containing three dark lunulate-dentate lines above middle and two below; the pale band preceding this is whitish green, traversed by a green lunulate-dentate line; the pale band following basal patch also contains in its costal half a darker green curved shade; pairs of black spots on margin at the ends of veins; fringe dark green; cell spot blackish.

*Hind wing*.—Brownish fuscous; with black interrupted marginal line and whitish fringe. Under side pale straw color, with black marginal border interrupted between 3 and 4 and thinning out below; fore wing also with outer black band to vein 2, angled on vein 4; hind wing with a line only; cell spots black.



Head, thorax, and abdomen green; dorsum with pairs of dark tunicles on each segment; abdomen beneath the legs straw color, the tarsi mottled with black.

*Expanse of wings*.—30 mm.

*Locality*.—One male from Peru.

Distinguished by the straw-colored under side and black bands.

*Type*.—Cat. No. 11389, U.S.N.M.

HAMMAPTERA THETYDARIA, new species.

*Fore wing*.—Dull sea-green, speckled with dark gray; the basal patch, central fascia, and prosubmarginal shade blackish-green; basal patch small, crossed by two or three darker lines, its edge crenulate; inner edge of central fascia concave, crenulate; outer edge from two-thirds of costa to three-fourths of inner margin, forming three small subcostal teeth, one above vein 7, one on each side of vein 6, vertical from 5 to 4, then incurved, the teeth between 2 and 4 inconspicuous; the fascia is traversed by darker waved lines, most conspicuous at costa, where it is twice as broad as at inner margin; green space below fascia broad, traversed by three or four irregular gray lines; the green band beyond it traversed by a darker green, and limited by a blackish green lunulate line, the inward teeth of which form dark marks on the veins; submarginal line forming white interrupted lunules, preceded by a dark shade containing three lines, broad above 4, with a rufous tinge on vein 6, narrow and vertical below 2, and interrupted between; pairs of black marginal spots at the vein ends; fringe dark and pale green.

*Hind wing*.—Dingy whitish, with a faint green tinge; a gray lunulate outer and submarginal line; a blackish cell spot; fringe like wing. Under side of fore wing blurred fuscous to outer edge of fascia, separated by a greenish whitish band from a quadrate apical dark blotch across which the submarginal lunules show as four whitish spots; anal region and whole of hind wing dingy whitish speckled with gray; a black cell spot and curved postmedian line.

Head, thorax, and abdomen pale green varied with blackish, the thorax and dorsum especially dark; under side and legs dingy whitish; tarsi mottled dark and light.

*Expanse of wings*.—35 mm.

*Locality*.—One male from Lombani, Peru, 9,500 feet.

*Type*.—Cat. No. 11390, U.S.N.M.

CCENOCALPE ALBIPUNCTA, new species.

Very much like *C. ignifera* Warren from Peru, for which it might easily be mistaken, owing to the white spot in submarginal line between veins 3 and 4, which is common to both. Instead, however, of



the bright orange of that species, the basal area and costal half of wing are only dull wood-brown, hardly lighter than the inner marginal area; all the lines in the present species are more waved; the edges of the central fascia are finely limited by a white line, and the submarginal line itself is finely white. In the hind wing the lines and bands are almost as distinct as in the fore wing, whereas they are very obscure in *C. ignifera*, and the same applies to the under side. The male, judging from the single specimen examined, is still more somberly colored than the female, and the lines appear less wavy.

*Expanse of wings*.—26 mm.

*Locality*.—One male and one female from Orizaba, Mexico.

*Type*.—Cat. No. 11387, U.S.N.M.

HYDRIOMENA LINEATA, new species.

*Fore wing*.—Whitish green, thickly powdered with olive scales, so that the whole surface appears mealy; lines black, irregular; a thick black line close to base; then four lines, irregularly parallel to each other, all angled outward above median vein, incurved below it, and again oblique outwards below submedian vein; of these the first represents the edge of basal patch, the last the inner edge of central fascia; the two middle ones are united at each end, outer line at two-thirds, oblique outward and angled on vein 6, vertical to 3, then incurved; submarginal line parallel to it, both of those swollen at costa; between them an interrupted gray line and another waved and dentate close before hind margin; marginal dashes black; fringe green.

*Hind wing*.—Semitransparent in basal half, greenish fuscous, blackish toward hind margin. Under side dirty greenish gray, with obscure dark markings.

Head, thorax, and abdomen pale green; palpi, patagia, metathorax, and dorsum marked with black.

*Expanse of wings*.—26 mm.

*Locality*.—One male from Orizaba, Mexico.

*Type*.—Cat. No. 11391, U.S.N.M.

PERIZOMA CÆRULEOPICTA, new species.

*Fore wing*.—Olive brown, powdered with darker fuscous and ferruginous scales from base to the outer edge of central fascia, the band between basal patch and fascia not paler; the fascia is edged with white, diffusely sprinkled with ferruginous and olive brown, not broadly white, as in *P. emmelesiata* Snellen, which otherwise the species much resembles; the two bottom lunules on the outer edge of central fascia are filled up for half the width of fascia with pale blue; the marginal area is varied with olive brown and ferruginous



scales, the submarginal line being irregularly preceded and followed by black lunulate and wedge-shaped markings, the veins being slightly paler; the costa throughout is marked with black spots; pairs of black spots at the vein ends; fringe brown checkered with darker, the apical intervals white.

*Hind wing*.—Glossy white with a few gray speckles; marginal line dark; fringe white. Under side of fore wing brownish fuscous, with white outer band; the costa dark, with ochreous yellow spots; fringe mottled brown and white, with white base; hind wing white, thickly brown speckled, with dark cell spot and outer line.

Head, thorax, and abdomen olive brown, varied with ferruginous; the dorsum with dark spots; tibiae and tarsi all mottled with black.

*Expanse of wings*.—42 mm.

*Locality*.—One male from Peru.

Larger than *emmelesiata* Snellen; distinguished at once by the bluish blotch.

*Type*.—Cat. No. 11392, U.S.N.M.

PSALIODES OLIVARIA, new species.

*Fore wing*.—With the dark shading olive green, the pale dividing lines slightly shining, whitish or cream color; basal patch olive, edged by a fine black line sharply angled on the subcostal vein, then oblique inwards and waved; central fascia dark olive green, edged with blackish, the inner edge irregularly indented, the outer sharply angled outwards between veins 5 and 6, then oblique inwards and irregularly crenulate; at costa and inner margin the fascia is darkened with blackish scales; band before fascia with two pale olive shades, the inner the broader; band beyond fascia with two similar shades, the outer the broader, except above vein 5, where it is interrupted by the pale preceding line, an olive triangular blotch marked with dark scales between apex and vein 4; fringe pale ochreous, its basal half olive checkered with black beyond veins, the olive shade darker from apex to vein 4 and anal at angle; a slight dark cell spot.

*Hind wings*.—Olive gray, with faint cell spot and traces of a post-median line on inner margin; fringe ochreous dotted with dark.

Under side olive ochreous toward costa of fore wing, grayer below; a dark greenish apical triangle; fringe checkered with greenish fuscous; hind wing pale ochreous with some dark olive striae, a dark cell spot, and sinuous postmedian line.

Head, thorax, and abdomen olive ochreous; legs the same, but the tibiae and tarsi mottled externally with dark greenish.

*Expanse of wings*.—18 mm.

*Locality*.—One male from Castro, Parana, Brazil.



Distinguished by the neatness and clearness of the markings, and by the absence beneath of the orange subcostal streak of fore wings.

*Type*.—Cat. No. 11393, U.S.N.M.

PTEROCYPHA PAULARIA, new species.

*Fore and hind wing*.—Exactly like *Pterocypa chama* Schaus from Paraguay, on the upper side; under side likewise greatly resembling *chama*; the cell spots large and black; followed by three dark parallel lines of which the outermost is dentate; marginal area of fore wing with a blackish submarginal costal blotch reaching vein 4, and below simply gray, the whole hind margin grayish white, the marginal line black; in the hind wing the outer line is complete across wing, and the submarginal band is complete but quite narrow except toward costa.

Abdomen with a pair of divergent brown marks on the back of each segment.

*Expanse of wings*.—52 mm.

*Locality*.—One male from São Paulo, Brazil.

*Type*.—Cat. No. 11394, U.S.N.M.

STREPSIZUGA, new genus.

A development of *Triphosa*, from which it differs in the following points: The forehead is prolonged into an acute scale cone; the palpi are triangular, heavily scaled, procumbent; the retinaculum is very largely developed, hairy, bilobed, the membrane vitreous and in certain lights highly iridescent; the frenulum in the male has a vesiculous rounded transparent base, beyond which it is dark brown, and ensiform in shape, ending in an acute point, but in the basal half ligulate, and near the base constricted and twisted.

*Type*.—*Strepsizuga aberrans*, new species.

STREPSIZUGA ABERRANS, new species.

*Fore wing*.—Brown, the lines darker, toward base and along costa varied in parts with pinkish ochreous; basal line dark brown edged with ochreous, rising close to base on both margins and prominently rounded in cell; inner edge of central fascia from two-fifths of costa to two-fifths of inner margin, acutely angled outwards below subcostal vein and less sharply on median and submedian, concave outwards between the angles; the broad space between it and basal patch paler brown with dark cross lines angled like the inner edge itself; outer edge lunulate-dentate, the teeth pointing basewards, outcurved from costa at two-thirds to vein 2, then vertical, preceded by three dark brown waved lines; the inner edge is succeeded by a blackish shade containing the black cell spot; marginal third dark



brown with several waved darker lines, containing on costa a large triangular pinkish ochreous blotch, the base of which on costa is occupied by an irregular brown blotch; submarginal line obscure, but marked by a large ochreous spot above submedian fold; marginal festoon velvety brown, interrupted on veins by a pale spot; fringe brown.

*Hind wing*.—Paler brown; with cell spot, antemedian line, and distinct waved postmedian line darker; submarginal lines marked by black dashes on veins, and only plain toward inner margin.

Under side dull smoky brown with mere traces of lines but distinct black cell spots. Palpi, face, prothorax, and a belt at base of abdomen black brown; thorax and patagia ochreous; the rest brown like wings.

*Expanse of wings*.—44 mm.

*Locality*.—One male from Jamaica.

*Type*.—Cat. No. 11395, U.S.N.M.

XANTHORHOË VERARIA, new species.

*Fore wing*.—Dark brownish fuscous; the basal patch, the outer half of central fascia, and a band preceding submarginal line darkest; basal patch small, edged by a gray line; inner edge of central fascia slightly concave basewards, at one-third; outer edge at two-thirds, outcurved from costa to vein 2, then vertical, dentate lunulate, the teeth pointing inwards and marked by pale dots on veins; similar, but less conspicuous pale dots on veins along its inner edge and that of basal patch; a dull bluish gray waved band with darker center precedes the brown submarginal band, the outside edge of which is formed by the bluish gray submarginal line; a slight oblique bluish gray shade from apex; pairs of marginal black spots at ends of veins, alternating with pale ochreous dots; fringe brown, with paler tips; an indistinct large blackish cell spot; costa marked with many small yellowish dots at the commencements of the lines.

*Hind wing*.—Duller fuscous, without basal patch; the other markings as in fore wing. Under side grayer fuscous, speckled with pale scales; the lines darker; the outer edge of central fascia with conspicuous white dashes on veins; cell spots black.

Head, thorax, and abdomen dark fuscous varied with paler scales; antennæ dark fuscous, with the basal segment pale ochreous.

*Expanse of wings*.—30 mm.

*Locality*.—One male from Rinconada, Vera Cruz, Mexico.

The discocellular of the hind wing is vertical in upper third, oblique in the lower two-thirds; the radial from well above the middle; in the fore wing more than the upper half is vertical, the shorter arm oblique.

*Type*.—Cat. No. 11396, U.S.N.M.



## NOTHLOBA, new genus.

*Fore wing*.—In the male very broad, the hind margin longer than the inner; the lower two-thirds more oblique than the upper third; in the female the hind margin is not so long as the inner margin.

*Hind wing*.—Small, especially in the male, with a small flap at base of inner margin in that sex.

Abdomen stout, and in the males elongated; palpi porrect, hairy, the last segment drooping; antennæ as in *Rhopalodes*; tongue and frenulum present, hind tibiæ with 4 spurs.

*Neuration*.—Fore wing, as in *Physoloba*; hind wing in female also as in *Physoloba*; in the male the subcostal is separate from costal, but united at end of cell by a bar; 6 and 7 stalked; 6 reaching hind margin below middle; no radial visible; only two veins from the lower end of cell; inner margin with a full fringe and somewhat thickened.

*Type*.—*Notholoba schausi* Warren.

The discocellular in hind wing of the female is slightly triangulate and the radial rises from the lower angulation.

## NOTHOLOBA SCHAUSI, new species.

*Fore wing*.—Grayish white, tinged with brown in basal and marginal areas; basal patch very small, limited by a dark band between two lines angled on median; inner edge of central fascia sinuous at one-third, followed by a grayish brown band; outer edge at two-thirds, bluntly angled at 6 and 4, then incurved, lunulate-dentate, the teeth pointing basewards and well marked, preceded by two similar lines and below costa by a brown band, the teeth on the veins running in to the inner band; a blackish linear cell spot in the central pale area; interval before fascia with the center brown edged by pale bands with a gray line down them; band beyond narrow, with a gray middle line; submarginal line pale and waved, preceded by a brown tinge, which forms blotches at costa and beyond cell, with the lunules outwardly edged with blackish; pairs of blackish marginal spots at the vein ends; fringe mottled dark and light gray.

*Hind wing*.—Rufous gray, along the costa whitish.

Under side rufous gray, the fore wing whitish along inner margin; the markings all showing slightly.

Head, thorax, and abdomen pale gray; the metathorax with a pair of dark spots; the segments of dorsum with blackish pale-edged rings.

The female is paler, with the bands blacker, but the insect is not so fresh as the male, which probably accounts for the difference.

*Expanse of wings*.—Male, 36 mm.; female, 40 mm.



*Locality*.—One male and one female from Chili.

*Type*.—Cat. No. 11397, U.S.N.M.

Named for Mr. William Schaus.

PHYSOLOBA, new genus.

*Fore wing*.—Triangular; costa arched at base and apex, straight between; hind margin obliquely curved, as long as inner margin.

*Hind wing*.—Small; both angles rounded off, with a minute blistery lobe at base of inner margin.

Abdomen of male laterally tufted toward anus; antennæ as in *Rhopalodes*; palpi short and thick, hairy beneath, the terminal segment minute; tongue slight; frenulum very fine.

*Neuration*.—Fore wing, cell half as long as wing; discocellular oblique, straight; first median nervule at two-thirds, second at eleven-twelfths; radials normal; areole double; hind wing of male with costal and subcostal anastomosing for three-fourths of cell; 6 and 7 stalked; radial from center of discocellular, which is oblique as in fore wing; first median nervule quite short from one-half to middle of inner margin, second well before third; the lobe quite small, pellucid.

*Type*.—*Physoloba griseofasciata*, new species.

PHYSOLOBA GRISEOFASCIATA, new species.

*Fore wing*.—Pale gray, speckled with darker; crossed by a succession of dark gray sinuous lines; those forming the edge of basal patch and the bands of central fascia, also the presubmarginal shade from costa to middle of wing filled up with dark gray; the paler bands with dark central lines; pairs of blackish spots along margin at the vein ends; fringe pale gray.

*Hind wing*.—White.

Under side of fore wing pale gray, darker toward costa with a pale postmedian band; hind wing white; cell spots dark.

Head and thorax dark gray; abdomen paler; fore legs black, with the joints pale.

*Expanse of wings*.—25 mm.

*Locality*.—One male from Castro, Parana, southeast Brazil.

*Type*.—Cat. No. 11398, U.S.N.M.

CAMBOGIA ROSEOCINCTA, new species.

*Fore wing*.—Pale yellow, slightly deeper along costa and hind margin; costa with many oblique rosy streaks, indicating the beginnings of cross lines, none of which, however, are continued clearly below subcostal vein, except the submarginal, which forms a complete deep rosy curved band to anal angle; fringe yellow; cell spot red.



*Hind wing*.—With the rosy submarginal band; a faint cell spot and outer line rosy; this last is faintly traceable also on fore wing.

Under side suffused with rosy, most densely along costa of fore wing and hind margins of both wings, where the band becomes marginal.

Head, thorax, and abdomen yellow dusted with rosy scales; vertex and antennal shaft white, the pectinations fuscous.

*Expanse of wings*.—17 mm.

*Locality*.—One male from Rockstone, Essiquebo, Dutch Guiana, September, 1904.

*Type*.—Cat. No. 11399, U.S.N.M.

CALLIPIA COSTINOTATA, new species.

*Fore wing*.—Dingy, cinereous, darker toward apex and hind margin, without any distinct markings, except along costa; costal area from base to middle bearing dark blotches, three near base and two at middle, of which the latter is broader, separated by pale ochreous spaces which toward base are tinged with deep red; the lines, of which these costal blotches indicate the commencement, are probably plainer in some examples; fringe concolorous.

*Hind wing*.—Wholly cinereous.

Under side of fore wing blurred cinereous, the apical area blackish, varied with reddish and pale vermiculations; costal blotches as above; hind wing wholly blackish fuscous, with thick pale vermiculations, and indistinct traces of a pale curved fascia beyond middle; a white cell spot on upper arm of discocellular; inner margin narrowly whitish; fringes of both wings glossy cinereous, mottled with pale.

Head, thorax, and abdomen cinereous; legs cinereous, the tibiae and tarsi mottled with pale.

*Expanse of wings*.—35 mm.

*Locality*.—One male from Peru.

*Type*.—Cat. No. 11400, U.S.N.M.

MARMOPTERYX ELUDENS, new species.

*Fore wing*.—Pale dirty gray, overlaid, especially toward costa and hind margin with olive gray scales, the whole wing having a blurred look; costa with several slight dark marks, indicating lines, none of which are visible except toward hind margin, where the interspaces between the veins are marked with a double row of elongate dark blotches; fringe slightly paler gray.

*Hind wing*.—Pale gray; the dark interspaces of under side showing through.

Under side of fore wing darker gray, the costal area olive gray, with slight darker shading between the veins; hind wing with the cell and all the interspaces charged with coarse dark green scales.



Head, thorax, and abdomen olive gray, sprinkled with dark green scales.

*Expanse of wings*.—40 mm.

*Locality*.—One male from Peru.

*Type*.—Cat. No. 11401, U.S.N.M.

Subfamily NEPHODIINÆ.

NEPHODIA MARCIDA, new species.

*Fore wing*.—Semitransparent, dull whitish; costa above subcostal vein dull gray; the whitish area is bounded by a curved dark gray shade from top of discocellular to three-fourths of inner margin, beyond which the wing is smoky gray, darkest along the hind margin, the space immediately beyond the curved limiting shade showing as a curved paler fascia; veins and fringe gray; a slight gray spot at middle of inner margin.

*Hind wing*.—Similar, but the dark marginal area narrower; the costal broader.

Under side like upper; the pale space in the darker margin at its center.

Head, thorax, and abdomen whitish; palpi and antennæ blackish.

*Expanse of wings*.—30 mm.

*Locality*.—One male from Bolivia.

*Type*.—Cat. No. 11402, U.S.N.M.

Subfamily SELIDOSEMINÆ.

CALVERTIA, new genus.

*Fore wing*.—Costa nearly straight, with only a faint curve at base and apex; apex distinct; hind margin faintly curved; inner margin somewhat convex; anal angle distinct.

*Hind wing*.—Ample; both angles and the hind margin rounded. Antennæ simple, filiform; palpi porrect, the second segment hairy, the third smooth, spatulate, slightly decumbent; abdomen with slight lateral tufts; hind tibiæ of male swollen, containing a large tuft of fluffy hairs.

*Neuration*.—Fore wing, cell half as long as wing; discocellular vertical above, oblique below middle; first median nervule just beyond middle, second at seven-eighths; radials normal; both subcostal and median veins bent inwards at extremity; 7, 8, and 9 stalked from the bend; 10 and 11 separate from cell; hind wing, costal and subcostal approximated for about half of cell; veins 3 and 7 before ends of cell.

A genus of stout and strongly built insects.

*Type*.—*Calvertia fumipennis*, new species.

*Asestra izquierdii* Bartlett-Calvert will be referable here.

The genus is named after William Bartlett-Calvert, author of the species just mentioned.



## CALVERTIA FUMIPENNIS, new species.

*Fore wing*.—Dull olive-tawny, striated with black, this ground color being almost hidden by black shades and smoky brown suffusion; first line from about one-fifth of costa to one-third of inner margin, angled outwards above and below median, followed by a broad blackish band, which is limited externally by the median line, starting from a black costal blotch at two-fifths, bluntly projecting outwards in middle, and incurved below; outer line from three-fifths of costa, preceded by a black shade, forming a decided tooth externally on vein 6, then incurved parallel to hind margin and lunulate-dentate, followed in places by a bright pale line; submarginal line waved, very obscure, preceded on costa by a black blotch, and followed throughout by a smoky brown shade, which encroaches upon it in the middle; large black marginal lunules between the veins, beyond which lunules the base of the brown black fringe is pale ochreous; cell spot black.

*Hind wing*.—Smoky brown-black, the tawny ground color being restricted to the cell and space beyond it; a dark cell spot, black thick postmedian line angled on vein 6, and edged with tawny; fringe paler, with dark brown mottlings.

Under side dull tawny, with all the markings olive brown; hind wing with the postmedian line double.

Head, thorax, and abdomen fuscous brown; abdomen beneath and legs paler; tarsi black with pale joints; tibial tuft pale ochreous.

*Expanse of wings*.—48 mm.

*Locality*.—One male from Chili.

*Type*.—Cat. No. 11403, U.S.N.M.

## CENOPTILA SEPARATA, new species.

*Fore wing*.—Yellow, striated with fulvous orange and lilac gray; costal streak and cross lines lilac gray; first line thick, nearly vertical and straight, at one-third, followed by some orange fulvous scaling; outer line at two-thirds of costa, concave to vein 4, then lunulate-dentate, to four-fifths of inner margin; the space between the two lines below median vein is partially filled up with orange and lilac shading, and contains a black cell spot and a dark median line, which is sinuous and much nearer outer than inner line; a broad lunate submarginal band followed by another less distinct close to margin.

*Hind wing*.—Without inner line; the median and dentate-lunulate outer line meeting on inner margin; the rest as in fore wing; the whole wing with orange fulvous speckling.

Under side dull pale ochreous, with the markings just indicated.

Head, thorax, and abdomen yellow, speckled with orange fulvous; basal segment of abdomen fulvous.



*Expanse of wings*.—48 mm.

*Locality*.—One male from Jalapa, Mexico.

*Type*.—Cat. No. 11404, U.S.N.M.

*CENOTHALIA INORNATA*, new species.

*Fore wing*.—Uniformly fawn-colored, finely speckled with dark; cell spot black; no distinct lines, these being represented by black and white vein dashes; inner line nearly vertical at one-third, the dots white-tipped baseward; outer line oblique outward from fully two-thirds of costa to vein 4, and oblique inward from 3 to inner margin, the white tips of the dots exterior; fringe concolorous.

*Hind wing*.—With outer series of dots only.

Under side much paler, with clearer speckling; cell spot black in fore wing.

Head, thorax, and abdomen like wings; face and palpi brown.

*Expanse of wings*.—26 mm.

*Locality*.—One male from São Paulo, southeast Brazil.

*Type*.—Cat. No. 11405, U.S.N.M.

*THYSANOPYGA FRACTIMACULA*, new species.

*Fore wing*.—Pale ashy gray, the marginal third darker smoky gray, covered throughout with fine dark striations; the lines dark gray, somewhat diffuse, parallel to hind margin; first near base, bent in cell; second straight just before middle, followed by the simple black cell spot; outer line slightly projecting on vein 5 and submedian fold; submarginal marked only on costa by two black lunules, which are followed above vein 7 in the apex of the wing by a blackish blotch (absent in the male), and preceded between veins 7 and 5 by a blackish cloud; marginal line black, interrupted; fringe dark gray.

*Hind wing*.—With three dark lines, antemedian, postmedian, and submarginal; cell spot a black ring with small white center; the whole wing smoky gray.

Under side whitish gray with grayer speckles; both wings with dark gray marginal border, and dark cell spots.

Head, thorax, and abdomen pale gray; face slightly darker.

*Expanse of wings*.—30 mm.

*Locality*.—One male and one female from Jalapa, Mexico.

The description is taken from the female which is in better condition than the male.

Intermediate between *T. oroanda* Druce and *T. nigristicta* Warren.

*Type*.—Cat. No. 11406, U.S.N.M.

*THYSANOPYGA PALLIATA*, new species.

*Fore wing*.—Pink and lilac gray, crossed by shades of chocolate or purple-brown; the costa black-brown to submarginal line with a dark subcostal streak of black and gray scales mixed; basal area



chocolate-brown edged by a straight, thick, deeper brown shade from below one-third of costa to beyond one-third of inner margin; cell spot vertical, silvery white, followed by the median shade which is angled outward on median and submedian veins, concave between; outer shade close beyond, parallel to but thicker than the median, forked below middle, the outer branch running to anal angle; submarginal line fine, dentate-lunulate, the teeth dark on the veins, touching the outer shade at vein 2; a whitish tooth-shaped apical blotch reaching vein 6 and not touching hind margin; fringe brown beyond a fine dark marginal line with white dots at the vein ends.

*Hind wing*.—With basal patch of fore wing produced along inner margin of uniform thickness to hind margin at vein 2, including the silvery white cell spot, and almost obscuring the two curved shades answering to the median and outer shades of fore wing; submarginal line with the teeth black; the apical area chestnut brown. Under side of both wings dull brick red with dark cell spots and submarginal lines. The apex of fore wing tinged with lilac gray.

Head, shoulders, and fore legs blackish-brown; thorax and abdomen chestnut-brown; under side of abdomen and legs gray.

*Expanse of wings*.—35 mm.

*Locality*.—One female from St. Jean, Maroni River, French Guiana, July, 1904. Nearest to *T. nigricosta* Warren, distinguished from it and *apicitruncaria* Herrich-Schaeffer and its allies by the transverse shades instead of distinct lines.

*Type*.—Cat. No. 11407, U.S.N.M.

THYSANOPYGA PRUNICOLOR, new species.

*Fore wing*.—Dull purplish brown, with an admixture of lilac gray toward base; the lines deeper brown, somewhat obscure; first curved close to base; second, just before middle, parallel to hind margin; third at two-thirds somewhat waved; submarginal blotched and very indistinct; an apical white blotch containing gray scales and with a small brown patch on its costal edge; cell spot marked by a few pale scales; fringe concolorous, beyond a fine dark marginal line.

*Hind wing*.—With three brown lines, antemedian, postmedian, and submarginal; cell spot oval, well-defined, snow white. Under side dull lilac gray, speckled with dark; marginal border diffusely darker.

Head, thorax, and abdomen dull lilac gray.

*Expanse of wings*.—30 mm.

*Locality*.—Two females from Rio Janeiro, Brazil.

*Type*.—Cat. No. 11408, U.S.N.M.

The second of these examples differs somewhat from the type; the lilac gray scaling is more predominant, and in consequence the brown lines, which seem to be thicker and more waved, are clearer than in the



type; the apical spot is larger, lilac gray and not white, and in neither wing is there any trace of white cell spot; these were probably lilac gray and worn off.

Subfamily ENNOMINÆ.

NEREIS, new genus.

*Fore wing*.—Triangular; costa straight till shortly before apex, which is blunt; hind margin straight; anal angle well expressed.

*Hind wing*.—With both angles rounded; hind margin slightly curved; inner margin long.

Antennæ of male ciliated; palpi upcurved in front of face; tongue and frenulum present, the latter very fine, white; hind tibiæ thickened, with four short spurs and apparently without hair tuft.

*Neuration*.—Fore wing, cell half of wing; discocellular vertically concave; postmedian nervule from just beyond middle, second close before third; radials normal; 7, 8, and 9 stalked from before end of cell; 10 and 11 coincident, anastomosing at a point with 12, 10, again anastomosing at a point with 8 and 9; hind wing, costal and subcostal quite shortly approximated near base, 7 and 3 from before angles of cell.

*Type*.—*Nereis opalina*, new species.

*Syllexis* Guenée, *Gonogala* Butler, and *Gonorthus* Butler are its nearest allies; from them all it is distinguished by the entire hind margins of both wings.

NEREIS OPALINA, new species.

*Fore wing*.—Subtransparent, very pale greenish white; the costa cream color; two broadish white lines; the first well curved, at one-third, the outer from two-thirds of inner margin, oblique, above vein 4 bent outwards toward hind margin, shortly retracted to costa before apex, where it ends in a short streak of crimson scales; beyond this is another, rather larger, spot of red and black scales which is apparently the commencement of a submarginal line; cell spot white, like the lines; fringe pale yellow.

*Hind wing*.—Without basal line; the outer straight from just before apex to just above anal angle. Under side whiter; costa of fore wing yellowish; marginal third of both wings beyond outer line denser white. Thorax and abdomen white; palpi white, externally black-brown; face and vertex white varied with deep red; fore legs in front and antennæ ferruginous.

*Expanse of wings*.—34 mm.

*Locality*.—One male from Santiago, Cuba, January, 1905. The species might easily be mistaken for a *Dichorda*.

*Type*.—Cat. No. 11409, U.S.N.M.





Warren, William. 1908. "Descriptions of new species of South American geometrid moths." *Proceedings of the United States National Museum* 34(1601), 91–110. <https://doi.org/10.5479/si.00963801.1601.91>.

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