

## NOTES ON ARIZONA PHALAENIDÆ (Lepid.)

BY WILLIAM BARNES AND F. H. BENJAMIN

*Decatur, Illinois****Polia luteimacula*\* Barnes & Benjamin, n. sp.**

Male antennæ serrate and fasciculate. Head and thorax black, gray, and white mixed, more or less tinged with purple and rufous. Fore wing: ground color gray heavily irrorated and overlaid by black, with some rufous suffusion, and a purplish tinge; basal line obsolescent, waved; t. a. line double, its course slightly outwardly oblique, as outcurved crescents, from costa to median vein, thence to vein 1, and to inner margin; orbicular and reniform not large, faintly outlined by black, pale filled, the filling obscured by dusky central marks and heavy powderings, more or less red tinged, which shade extends beyond the cell to the t. p. line; claviform moderate to small, variable, distinctly outlined by black, filled with a rufous shade which continues to the t. p. line; t. p. line double, black, its outer line indistinct, angled outward below costa, thence oblique to about vein 5, thence incurved, produced to a strong outward point on vein 1, otherwise produced to moderate points on the veins; s. t. a yellowish wavy line defined on both sides by black and terminating in a moderately large, black defined, spot at tornus; a thin black terminal line; fringe fuscous-gray, with darker interline and tips, paler basally. Hind wing: nearly uniformly fuscous, the veins slightly darker; fringe luteous at base, with fuscous interline and pale tips. Beneath: with a dark common line; in general fuscous, the hind wing somewhat paler basally; discal spot obsolete on fore wing, obsolescent on hind wing; fringes as on upper side.

*Expanse:* ♂, 27-32 mm.; ♀, 30-31 mm.

Closely allied to *rubrifusa* Hamp., but the uniformly dark secondaries easily distinguish it. *P. gnata* Grt. belongs to the same group but its type, in the Neumögen collection, possesses white hind wings<sup>2</sup>. *P. agnata* Sm. is also allied<sup>3</sup>.

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\* Indicates specimens were submitted to Dr. William Schaus in order to ascertain that the species had not been described from south of the U. S. border.

<sup>2</sup> A further discussion of *gnata* and several other types in the Neumögen collection has been incorporated in a separate paper.

<sup>3</sup> We wish to call attention to the fact that male *agnata* Sm. has serrate antennæ, and if Hampson's characters are employed, belongs to this group.

Also that *segregata* Sm. and *gussata* Sm. are incorrectly placed on our lists, having serrate male antennæ and being closely allied to *plicata* Sm. and *negussa* Sm. In fact, we suspect that *negussa* is simply smooth *gussata*, and the same may be true between *segregata* and *plicata*. Careful study, based on abundant material, will be necessary to ascertain the exact relationship of these four names.

*Locality:* White Mts., Arizona.

*Types:* Holotype ♂ ; Allotype ♀ ; 8 ♂ , 2 ♀ , Paratypes.

*Notes:* From Barnes collection, collector unknown ; types in Barnes collection ; Paratype in U. S. N. M.

#### NEPHELISTIS Hamp

Type *Nephalistis congenitalis* Hamp.

1905, Hampson, Cat. Lep. Phal. B. M., VI, 250, type designated *congenitalis*.

Close to, but probably distinct from, *Trichopolia* Grt., see below.

#### TRICHOPOLIA Grt.

Type *Trichopolia dentatella* Grt.

1883, Grote, Pap. III, 76, lists *dentatella* and questionably *ptilodonta*.

1895, Grote, Abh. Nat. Ver. Bremen, XIV, 81, type designated *dentatella*.

1905, Hampson, Cat. Lep. Phal. B. M., V, 361, partim., type designated *dentatella*.

1923, Barnes & Benjamin, Bull. B'klyn Ent. Soc., XVIII, 123, type designated *dentatella*.

#### EUPOLIA Sm.

Type *Eupolia licentiosa* Sm.

1894, Smith, Trans. Amer. Ent. Soc., XXI, 69; p. 70, *licentiosa* sole species and therefore type.

1909, Hampson, Cat. Lep. Phal. B. M., VIII, 544, type designated *licentiosa*, but erroneously placed as section I of *Namangana*.

1923, Barnes & Benjamin, Bull. B'klyn Ent. Soc., XVIII, 123, type designated *licentiosa*; *licentiosa* = *dentatella*, *Eupolia* = *Trichopolia*.

We describe the following species in *Trichopolia* although our three specimens lack a dorsal tuft on the second abdominal segment. This tuft in *dentatella* is easily lost, is only visible on some specimens and as all other characters seem very similar, we think the tuft has probably been rubbed off our types of *suspicionis*.

Structurally the species would appear to fall into Hampson's *Nephelistis*. We have already pointed out (1923) that Hampson drew his description of the genus *Trichopolia* from specimens of *ursina* Sm., and found it necessary to erect the genus *Engelhardtia* for type *ursina*.

We do not know if the genus *Nephelistis* will fall into the synonymy of *Trichopolia* or not. Certainly it seems very closely allied, and mainly separated on secondary sexual characters.

*Trichopolia* comes very close to *Scotogramma*, but the front is not as much rounded out. It is also closely related to *Polia*, and some species now placed in *Eriopyga*. Most of these hairy-eyed genera need careful study to ascertain which should be retained and what species placed in them. Tentatively we place *Trichopolia* between *Admetovis* and *Lophoceramica*. This placement between *Trichoclea* and *Chabuata* brings *Trichopolia* into contact with its obvious exotic affinities, which possess pectinate antennæ in the male sex, such as *Hydræciodes* and *Nephelistis*.

***Trichopolia suspicionis*\* Barnes & Benjamin, n. sp.**

Male: Antennæ bipectinate, apically serrate and simple, ciliated. Mid tibiæ with tuft of long hair but not conspicuously dilated. ♀ antennæ simple, the joints slightly marked, ciliated. Androconia absent in both sexes. Palpi pale, marked with black on sides, second joint reaching about middle of frons, third joint porrect. Head and thorax brown irrorated with black, abdomen similar, with dorsal tuft on basal segment only; and slight lateral tufts.

Fore wing: ground color dull wood-brown, grayed by a scattering of black scales; transverse lines single, black; basal line from costa to the end of a short basal black dash, forming a loop; t. a. line outwardly oblique from costa to inner margin, only slightly excurved; claviform obsolescent; orbicular pale, moderate, slightly oblique, faintly outlined by black and with black powdered center; reniform centrally constricted, edged with an obsolescent series of black scales, then a pale faint line followed by a strong black edging, centrally with a blackish outlined inner crescent, the whole mark heavily powdered by black; t. p. line erect on costa, strongly excurved around cell, inwardly oblique, only a little incurved, below; s. t. line obsolete; terminal line thin, broken by veins; fringe pale, checkered by black.

Hind wing: whitish, subhyaline, with small discal spot and darker veins, some fuscous suffusion outwardly; a thin terminal fuscous line; fringe white, obsolescently interlined, and with yellowish base. Beneath: whitish; the fore wing more or less suffused with fuscous, especially in cell and on veins, with discal spot and t. p. line showing through, terminal line and fringe as on upper side; hind wing with only a scattering of fuscous scales, mostly on veins; terminal line and fringe as on upper side.

*Expanse*: ♂, 26-28 mm.; ♀, 26 mm.

From the only allied species, *dentatella*, known to us, the present species differs by the pectinations of the male antennæ being but about half as long, while the general coloration is much paler, the transverse lines much stronger and blacker.

*Locality:* Sells Post Office, Indian Oasis, Pima County, Arizona.

*Types:* Holotype ♂, Allotype ♀, 1 ♂ Paratype, all 1-10 May, 1923.

*Notes:* O. C. Poling, collector.

#### ATHETIS Hbn.

Type *Noctua dasychira* Hbn.

1822, Hubner, Verz. bek. Schmett., p. 209, lists *dasychira*, *palustris*, *caliginosa* and *cubicularis*.

1909, Hampson, Cat. Lep. Phal. B. M. VIII, 299, type designated *furvula*, apparently for synonym *dasychira*.

1911, Warren, in Seitz, Macrolepid., III, 207; p. 208, type designated *furvula*, apparently for synonym *dasychira*.

1916, McDunnough, Ent. News, XXVII, 397, replaced by *Caradrina*.

#### ATYPHA Hbn.

Type *Noctua pulmonaris* Esp.

1822, Hubner, Verz. bek. Schmett., p. 213, lists *pulmonaris argillacea* and *ochroleuca*.

1909, Hampson, Cat. Lep. Phal. B. M., VIII, 299, type designated *pulmonaris*.

#### HAPALOTIS Hbn.

Type *Noctua furvula* Hbn.

1825, Hubner, Verz. bek. Schmett., p. 254, lists *furvula*, *lupula*, *ravula*, *fuscula* (*polygramma*), *atrata*, *candidula* and *venustula* (*hybnerana*).

1909, Hampson, Cat. Lep. Phal. B. M., VIII, 299, type designated *furvula*.

#### NEBRISSA Wlk.

Type *Nebrissa bimacula* Wlk.

1862, Walker, Jour. Linn. Soc., Zool., VI, 194.

1909, Hampson, Cat. Lep. Phal. B. M., VIII, 299, type designated *bimacula*.

#### ANORTHODES Sm.

Type *Anorthodes prima* Sm.

1891, Smith, Trans. Amer. Ent. Soc., XVIII, 114, *prima* sole species and therefore type.

1909, Hampson, Cat. Lep. Phal. B. M., VIII, 299, type designated *tarda*, apparently for synonym *prima*.

*Athetis* Hbn. as used by Hampson is apparently correct in place of *Caradrina* as used in the Barnes & McDunnough Check List. *Caradrina* has type *i-intactum* by Duponchel, 1829, and will likely replace *Lycophotia* Hbn. as used by Hampson and Barnes & McDunnough.

*Elaphria* Hbn., placed by Hampson as a synonym of *Athetis* was first described in the Zutr. Exot. Schmett., I, pl. XIII, *grata* sole species and therefore type. This will have priority over the monotypic genera *Monodes* Gn. (type *nucicolora* Gn.) and *Alpesa* Wlk. (type *villicosta* Wlk.)

***Athetis indigena*\* Barnes & Benjamin, n. sp.**

Palpi cream-colored, black at the sides. Head and thorax pale brownish with a violaceous cast. Collar with a broad black band at its base, else concolorous with the thorax. Abdomen pale brownish above, yellowish beneath, the genitalia of the male surrounded by long yellow hair. Fore wing: ground color dull pale wood brown, with a slight violaceous tinge and a silken lustre, darkened and grayed by scattered black scales, lines black; basal line geminate, its outer line indistinct, waved from costa to submedian fold, obsolescent below; t. a. line geminate, its inner line obsolescent, appearing as a dot on costa and again as a thin irregular line from costa to inner margin; orbicular obsolescent, more or less indicated by a faint ring of black scales; claviform obsolete; reniform indistinct, black centered due to intersection by an obscure median shade, marked by four pale yellowish points; t. p. line faintly geminate, the inner line stronger, as a dot on costa excurved around cell, incurved below, produced to points on the veins; s. t. obsolescent, its course indicated by a faint yellowish shade which is marked inwardly by slight dusky shades and one or two black dashes; a thin terminal line broken by the veins; fringe luteous at base, dark and obscurely interlined. Hind wing: ♂, whitish, subhyaline, the veins and outer portion darkened by fuscous; ♀, darker, almost appearing fuscous; fringe yellowish at base, with gray interline and white tips. Beneath: whitish, the fore wing largely suffused with fuscous with slight discal dot and transverse line; hind wing with scattered fuscous scales mainly along veins and toward the outer margin which is somewhat darkened, with discal dot and transverse line: fringes, all wings, as on upper side: sexes similar on under side.

*Expanse*: ♂, 29-32 mm.; ♀, 31-33 mm.

Allied to *triquetra*, with a similar set of black subterminal marks but lacking the black in the costal-subterminal region; at once distinguishable by the entirely different type

of reniform and the black at the base of the collar. It is also considerably heavier in build. Perhaps *triquetra* and *indigena* should be placed in *Ariathisa*; but we prefer to retain them with their North American allies.

"*Caradrina*" *derosa* Morr., is placed by Hampson as a synonym of *capularis* Gn., but a figure of the type would indicate that it might be more nearly related to *indigena*. We know of nothing like this figure, which does not seem to match Hampson's plate CXXXII, figure 12 of *capularis*; having strong black markings on the reniform. Not knowing how much *capularis* varies, we hold the status of *derosa* in abeyance. Even if distinct from *capularis* it is probably exotic.

*Localities and number and sexes of types:* Holotype ♂, Brown's Cañon, Baboquivari Mts., Pima County, Arizona, elevation approximately 5000 ft., (O. C. Poling), 1-15, June, 1923; Allotype ♀, id.; 2 ♂ Paratypes, id.; 1 ♂ 1 ♀ Paratypes, Baboquivari Mts., Pima County, Arizona, elevation approximately 5000 feet (O. C. Poling), 15-30 June, 1923, 1 ♂ Paratype, Palmerlee, Arizona, 8-15 May.

*Notes:* Types in Barnes collection: Paratype in U. S. N. M.

#### CELIPTERA VALINA Schs.

1901, Schaus, Ann. Mag. N. H., (7), VIII, 86, *Mocis*.

1913, Hampson, Cat. Lep. Phal. B. M., XIII, 135, pl. CCXXV, f. 5 (type), *Celiptera*.

Two males, three females, were received from the Baboquivari Mts., Arizona (O. C. Poling), dates 15-30 July, 1-15 August, 15-30 August, 1-15 September.

The females agreed with Hampson's figure. Two males, one female, were sent to Dr. Schaus for comparison with his type and series.

The species is rather variable. It also appears somewhat sexually dimorphic, the males darker marked and lacking the yellow found in the transverse lines of the females. This is replaced by rather diffused black.



Barnes, William and Benjamin, Foster Hendrickson. 1925. "Notes on Arizona Phalaenidae (Lepid.)." *The Pan-Pacific entomologist* 2, 16–21.

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