

Article II.—NOTES ON SOME NORTH AMERICAN MOTHS, WITH DESCRIPTIONS OF NEW SPECIES.

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The following studies of some North American moths are chiefly based upon material in the collection of the Museum, and upon some unpublished notes made by the late Henry Edwards on types in the collection of the British Museum.

BOMBYCIDÆ.

***Euhyparpax*, n. gen.**

Primaries twice as long as broad; costa almost straight, very slightly concave about the middle; apex pointed; outer margin slightly rounded; inner angle obliquely rounded. Secondaries reaching to the inner angle of the primaries, apex acutely rounded, outer margin almost oblique, hind angle rounded. Body (δ) slender, extending beyond the secondaries; anal tuft obsolete. Legs pilose, femora and tibiæ covered with long ciliated hairs, tarsi covered only with very short scales. Head depressed, palpi very short and barely visible owing to the scales covering the same and the thorax. Antennæ half as long as the primaries, stalk stout, with the pectinations to about the middle of equal length, when they very gradually decrease in length to about two mm. before the apex, which portion is without pectinations. The genus is allied to *Hyarpax*.

***Euhyparpax rosea*, n. sp.**

Head, thorax and body pale ochreous, slightly tinged with pink. Primaries pinkish ochreous, inclined to be rose-colored, with a very narrow undulated transverse line of a deeper color beyond the middle of the wing. This line is somewhat curved before reaching the costa. Beyond this line before the outer margin is a row of very indistinct spots of the same color. At the end of the discal area is a faint indication of an ochreous spot. Secondaries rose-colored, with the cilia paler. Undersides of all the wings wholly rose color, without any markings. The legs and body are also tinged with pinkish. Stalk of antennæ, above, whitish with the pectinations deep ochreous, of which color are also the antennæ beneath. Expanse of wings, 40 mm.

One male, West Cliff, Custer Co., Colorado (T. D. A. Cockerell). Coll. Hy. Edwards, Am. Mus. Nat. Hist.

***Arctia radians* (Walker).**

Apantesis radians WALKER, Cat. Lepid. Br. Mus. pt. III, 1855, p. 632.

Arctia radians SMITH, Can. Ent. Vol. XXIV, 1892, p. 134.

The late Hy. Edwards's note on the type of this insect is as follows: "Is the black form of *nais* with red base to secondaries, and a dash of pale ochre on base of primaries."

***Arctia rhoda* Butler.**

Arctia rhoda BUTLER, Ent. Mo. Mag. Vol. XVIII, p. 135; SMITH, Can. Ent. Vol. XXIV, 1892, p. 134.

This is the common form of *A. nais* with pink under wings, according to Edwards's unpublished note on the type in the British Museum. Prof. Smith, who also examined the type of *A. rhoda*, likewise refers it to the common form of *A. nais*.

***Arctia simplicior* Butler.**

Arctia simplicior BUTLER, Ann. Mag. Nat. Hist. Vol. VIII, 1881, p. 311.

According to Mr. Edwards's unpublished note on the type of this species, it is the female of *Arctia achaia*.

***Antarctia walsinghamii* Butler.**

Antarctia walsinghamii BUTLER, Ann. Mag. Nat. Hist. Vol. VIII, 1881, p. 311; SMITH, Can. Ent. Vol. XXIV, 1892, p. 135.

Prof. Smith says this is a strongly marked, deeply tinted *A. rubra*. Mr. Edwards's note on the type is as follows: "Is the very red female of *A. punctata*."

***Phragmatobia dubia* (Walker).**

Cynia dubia WALKER, Cat. Lepid. Br. Mus. pt. III, 1855, p. 682.

Phragmatobia dubia GROTE & ROBINSON, Trans. Am. Ent. Soc. Vol. II, 1868, p. 72; SMITH, Can. Ent. Vol. XXIV, 1890, p. 120.

Described as *Cynia dubia* by Walker, but placed in the genus *Phragmatobia* by Grote and Robinson. Mr. Edwards saw the type in the British Museum, and his note on the insect says "A good species. But the genus is near *Antarctia*. Habitat: Hudson's Bay."

Halisidota strigosa Walker.

Halisidota strigosa WALKER, Cat. Lepid. Br. Mus. pt. III, 1855, p. 736.

Halisidota laqueata HY. EDWARDS, Ent. Am. Vol. II, 1886, p. 166.

Mr. Edwards examined the type of *H. strigosa*, and refers this species to his *H. laqueata*. I have compared Walker's description with the type of *H. laqueata*, and cannot find any differences.

Habitat: St. Domingo (Walker); Texas (Edwards).

Orgyia leucostigma var. **obliviosa** Hy. Edwards.

Orgyia leucostigma var. *obliviosa* HY. EDWARDS, Ent. Am. Vol. II, 1886, p. 13.

This variety is nothing more than the spring form of the common *Orgyia leucostigma*. The late S. Lowell Elliot bred *obliviosa* from larvæ which he collected in June, and *leucostigma* from identical larvæ collected in September.

The form *obliviosa* differs from the fall brood by being smaller and much paler in color, with the markings less distinct. The female is said by Hy. Edwards to be also considerably smaller, but the specimens bred by Mr. Elliot are the same size as those bred from the autumn larvæ.

Twenty males, five females, from June larvæ; six males, nine females, from September larvæ. Coll. S. L. Elliot. Types of *obliviosa*: three males and two females, New Jersey. Coll. Hy. Edwards, Am. Mus. Nat. Hist.

Cossus populi Walker.

Cossus populi WALKER, Cat. Lepid. Br. Mus. pt. VII, 1856, p. 1515.

"Unknown to me. It has no black band, but diffused waved striæ over the wings." (Edwards, unpublished notes.) Habitat: St. Martin's Falls, Albany River, Hudson's Bay (Walker).

Cossus plagiatus Walker.

Cossus plagiatus WALKER, Cat. Lepid. Br. Mus. pt. VII, 1856, p. 1515.

Mr. Edwards's unpublished note on the type says, "Rather small. Have no doubt but that the type specimen is the same as the female of *C. robinia*."

ÆGERIIDÆ.

Tarsa denudata (Harris).

- Trochilium denudatum* HARRIS, Am. Journ. Sc. and Art, Vol. XXXVI, p. 310, 1839; Ins. Inj. Veget. 1st Edit. 1841, p. 231; *ibid.* 2d Edit. 1852, p. 252; *ibid.* 3d Edit. 1862, p. 330; MORRIS, Syn. Lepid. N. Am. 1862, p. 138 (quotes Harris); KELLCOTT, Can. Ent. Vol. XIII, 1881, p. 8.
- Ægeria denudatum* PACKARD, Ins. Inj. For. and Sh. Trees, 1881, p. 138.
- Fatua denudata* HY. EDWARDS, Papilio, Vol. II, 1882, p. 97; BEUTENMÜLLER, Ann. N. Y. Acad. Sc. Vol. V, 1890, p. 204; SMITH, Cat. Ins. N. J. 1890, p. 288; PACKARD, 5th Rep. U. S. Ent. Com. 1890, p. 540.
- Tarsa bombyciiformis* WALKER, Cat. Lep. Br. Mus. pt. VIII, 1856, p. 61.

Mr. Edwards's note says, "Walker's species is the male of *Fatua denudata* Harr." Mr. Edwards was acquainted with the types of both these species, consequently there can be no question as to their identity. The generic name *Fatua*, proposed by Mr. Edwards, has been previously employed in the Coleoptera, and therefore cannot stand. Walker's genus *Tarsa* would, however, have precedence over the name *Fatua*, having been established many years previous.

Bembecia marginata (Harris).

- Trochilium marginatum* HARRIS, Am. Journ. Sc. and Arts, Vol. XXXVI, 1839, p. 309; MORRIS, Syn. Lepid. N. Am. 1862, p. 137.
- Sphecia? marginata* WALKER, Cat. Lep. Br. Mus. pt. VIII, 1856, p. 12.
- Bembecia marginata* HY. EDWARDS, Ins. Inj. Forest and Sh. Trees, 1881, p. 261; Papilio, Vol. II, 1882, p. 52; SAUNDERS, Ins. Inj. Fruit, 2d Edit. 1889, p. 303; KELLCOTT, Journ. Columbus Hort. Soc. Vol. V, 1890, p. 27; BEUTENMÜLLER, Ann. N. Y. Acad. Sc. Vol. V, 1890, p. 204; SMITH, Insect Life, Vol. IV, 1891, p. 29; Bull. N. N. J. Agric. Exp. Station 1891, p. 9; Rep. Ent. N. J. 1891, p. 378; KELLCOTT, Can. Ent. Vol. XXIV, 1892, p. 44.
- Ægeria odyneripennis* WALKER, Cat. Lepid. Br. Mus. pt. VIII, 1856, p. 42; HY. EDWARDS, Papilio, Vol. I, 1881, p. 206.
- Ægeria rubi* RILEY, Sixth Rep. Nox. Ins. Missouri, 1874, p. 111; MARTIN, Fifth Rep. Nox. Ins. Illinois, 1881, p. 108; SAUNDERS, Ins. Inj. Fruit, 1st Edit. 1883, p. 313.
- Sesia flavipes* HULST, Bull. Brooklyn Ent. Soc. Vol. III, 1881, p. 76.

The type of *Ægeria odyneripennis* Walker was examined by the late Henry Edwards, and his note upon this species says: "*Bembecia odyneripennis* Walk. is the same as *B. marginata* Harris." I have carefully compared specimens of *B. marginata* with Walker's description and Edwards's figure of the type of *B. odyneripennis* (Papilio, Vol. I, pl. i, fig. 3), and find that these do not differ.

***Bembecia marginata* var. *albicoma* Hulst.**

Bembecia marginata var. *albicoma* HULST, Bull. Brooklyn Ent. Soc. Vol. VI, 1883, p. 8.

Differs from the type form by having the bands on the abdominal segment whitish instead of yellow, and by being somewhat darker in color. For some reason this variety was omitted from our lists.

Type: One male, Long Island, N. Y. Coll. Hy. Edwards, Am. Mus. Nat. Hist.

***Bembecia plecæformis* (Walker).**

Ægeria plecæformis WALKER, Cat. Lep. Br. Mus. pt. VIII, 1856, p. 40; HY. EDWARDS, Papilio, Vol. I, 1881, p. 206.

According to Mr. Edwards's notes, this is a good species. The figure of *B. plecæformis* (Papilio, Vol. I, pl. i) does not agree with Walker's description. It lacks the yellow bands on the abdominal segments, and also the yellow stripes on each side of the thorax.

Habitat: Nova Scotia (Walker).

***Bembecia emphytiiformis* (Walker).**

Ægeria emphytiiformis WALKER, Cat. Lep. Br. Mus. Vol. VIII, 1856; HY. EDWARDS, Papilio, Vol. I, 1881, p. 206.

Mr. Edwards's note says: "Unknown to me. It is a good species." A figure of the insect was published by Mr. Edwards in 'Papilio,' Vol. I, pl. i, fig. 1. It is totally unlike any *Ægerian* known to me. The habitat given by Walker for the insect is "United States."

***Albuna hylotomiformis* (Walker).**

Ægeria hylotomiformis WALKER, Cat. Lepid. Br. Mus. pt. VIII, 1856, p. 43; HY. EDWARDS, Papilio, Vol. I, 1881, p. 206.
Albuna hylotomiformis HY. EDWARDS, Papilio, Vol. I, 1881, p. 186.

On the type of this species in the British Museum, Mr. Edwards made the following note, "Is a good species and is unknown to me."

Habitat: Nova Scotia (Walker).

Sciapteron denotata (*Hy. Edwards*).*Albuna denotata* HY. EDWARDS, Papilio, Vol. II, 1882, p. 55.

Was described by Mr. Edwards as an *Albuna*, but the strongly pectinated antennæ and other characters place it in the genus *Sciapteron*, and the type was so labeled by Mr. Edwards. A single female was taken by Mrs. Slosson, at Franconia, New Hampshire. Previously it was only known from Montana.

Sannina uroceriformis *Walker*.*Sannina uroceriformis* WALKER, Cat. Lep. Br. Mus. pt. VIII, 1856, p. 64.

Mr. Edwards at one time considered this species to be identical with *Sannina exitiosa*, and it is so placed in our lists. His unpublished note on the type of this insect, which was examined by him, in the British Museum, says: "Neither the male or female of *S. exitiosa*. An entirely new species, with a red band on the abdomen, and looking like the female of *Phemonoe quinquecaudata* in general appearance."

Habitat: United States (Walker).

Ægeria bassiformis *Walker*.*Ægeria bassiformis* WALKER, Cat. Lepid. Br. Mus. pt. VIII, 1856, p. 39.

"This is a good species and not *Podosesia syringæ* Harr. as I thought. It is very like *Ægeria lustrans* Gr., but blacker. This may be from imperfect condition. It has four narrow bands on the abdomen, and one a little wider at base." (Edwards's unpublished notes.)

Habitat: United States (Walker).

Ægeria lupini *Hy. Edwards*.*Ægeria lupini* HY. EDWARDS, Papilio, Vol. I, 1881, p. 192.*Ægeria madariæ* HY. EDWARDS, Papilio, Vol. I, 1882, p. 201.

I am unable to find any differences whatever between the types of *Ægeria lupini* and *Ægeria madariæ* to warrant their separation as distinct species.

Types: *Æ. lupini*, three males and three females from California; *Æ. madariæ*, one male and one female from California. Coll. Hy. Edwards, Am. Mus. Nat. Hist.

***Ægeria pictipes* G. & R.**

Ægeria pictipes GROTE & ROBINSON, Trans. Am. Ent. Soc. Vol. II, 1868, p. 182; BAILEY, N. Am. Ent. Vol. I, 1879, p. 17, pl. iii.

Ægeria inusitata HY. EDWARDS, Papilio, Vol. I, 1881, p. 201.

The type of *Æ. inusitata*, which is before me, is nothing more than a worn and faded example of *Æ. pictipes*.

Types: *Æ. inusitata*, one male from Andover, Mass.; *Æ. pictipes*, three specimens from New York. Coll. Hy. Edwards, Am. Mus. Nat. Hist.

***Ægeria lustrans* (Grote).**

Trochilium lustrans GROTE, Can. Ent. Vol. XII, 1880, p. 213.

Ægeria sexfasciata HY. EDWARDS, Papilio, Vol. I, 1881, p. 193.

Ægeria consimilis HY. EDWARDS, Papilio, Vol. I, 1881, p. 194.

Ægeria eupatori HY. EDWARDS, Papilio, Vol. I, 1881, p. 195.

Ægeria infirma HY. EDWARDS, Papilio, Vol. I, 1881, p. 195.

There are no differences between the types of *Æ. sexfasciata*, *Æ. consimilis*, and *Æ. eupatori*, which will separate these from the large series of *Æ. lustrans*, including the type which I have before me, nor are there any varietal differences. *Æ. infirma* is also the same.

Types: *Æ. sexfasciata*, one male, Texas; *Æ. consimilis*, one male, Dorchester, Mass.; *Æ. eupatori*, one male, New York; *Æ. lustrans*, four males and seven females, New York, West Virginia, Ohio, Kansas, and Texas. Coll. Hy. Edwards, Am. Mus. Nat. Hist.

***Pyrrhotænia coloradensis*, sp. nov.**

Primaries reddish-orange, with the costa narrowly margined with fuscous, which is also the color of the median vein, the cilia and the rather large spot at the end of the discal area. Secondaries reddish-orange, with the cilia and discal spot fuscous. Wings beneath, same color as above. Head, thorax and legs black. The thorax has a few silvery-white hairs on the posterior portion (the scales on the anterior portion are abraded). Body black, with a silvery-white scale-like band on the posterior end of each segment. Caudal tuft black. Underside of body wholly sooty black. Expanse, 22 mm.

One female, Custer County, Colorado (Cockerell), Sept. Coll. Hy. Edwards, Am. Mus. Nat. Hist.

***Pyrrhotænia texana* Hy. Edwards.**

Pyrrhotænia texana HY. EDWARDS, Papilio. Vol. I, 1881, p. 204.

Pyrrhotænia wittfeldii HY. EDWARDS, Papilio, Vol. III, 1883, p. 156.

I am unable to find any differences whatever that will separate *P. wittfeldii* from *P. texana*. The latter name has precedence, and was described from Texas.

Types: *P. wittfeldii*, two males, Indian River, Florida; *P. texana*, two authentic males, Indian River, Florida. Coll. Hy. Edwards, Am. Mus. Nat. Hist.

***Pyrrhotænia behrensii* Hy. Edwards.**

Pyrrhotænia behrensii HY. EDWARDS, Papilio, Vol. II, 1882, p. 123.

Pyrrhotænia elda HY. EDWARDS, Ent. Am. Vol. I, 1885, p. 49.

Mr. Edwards's unpublished note on these species is as follows: "*P. elda* is the female of *P. behrensii*."

Types: *P. behrensii*, three males; *P. elda*, two females, Soda Springs, Siskiyou County, California.

***Pyrrhotænia fragariæ* Hy. Edwards.**

Pyrrhotænia fragariæ HY. EDWARDS, Papilio, Vol. I, 1881, p. 202.

Pyrrhotænia helianthi HY. EDWARDS, Papilio, Vol. I, 1881, p. 203.

A single type female, labeled *P. helianthi*, from Soda Springs, California, in the Edwards Collection, is the same as *P. behrensii*. Mr. Edwards certainly made a mistake in so labeling this specimen. *P. helianthi* was described by him from a single male and female from Virginia City, Nevada; it is therefore hardly possible that the specimen is one of the types; moreover, Mr. Edwards's unpublished note says: "*P. helianthi* is the female of *P. fragariæ*."