
CHAPTER IX.

REPORT

UPON

NEW SPECIES OF ZYGAENIDAE AND BOMBYCIDAE

COLLECTED IN PORTIONS OF

CALIFORNIA AND ARIZONA

DURING

THE YEARS 1871, 1872, AND 1873.

BY

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CHAPTER IX.

This collection, though small, is of much interest, as indicating what we may expect from Arizona when more is known of its fauna. Two of the species here enumerated range into Costa Rica and three into Mexico; two of them as far north as Portland in Oregon, and only one seems to be peculiar to Arizona. This linking of the United States to the tropical fauna of Central America and Mexico may largely swell the list of United States species. Nor should it be lost sight of that while the Mexican forms range into Arizona, the Gulf of California appears to have proved a barrier to their distribution in California. A number of specimens still remain to be identified in this collection.

BOMBYCIDÆ.

ARCTIINÆ.

EUCHAETES, Harris.

EUCHAETES ELEGANS, *sp. nov.*

PLATE XL, FIGS. 5, 6.

♂.—White. Head and palpi white, the latter rosy at the base, and the former very narrowly rosy behind, particularly near the eyes. Antennæ white; pectinations black. Prothorax, patagia, and thorax white. Abdomen *rosy* above; dusky white beneath, with a faint dorsal row of whitish spots, centered with dusky, and a lateral row of black spots. Legs whitish, with the coxæ of the anterior pair pale rosy. Wings pure glossy white, immaculate.

♀.—Similar to ♂, except that the colors of the abdomen are less distinct, and the last segment of the abdomen is tufted with dense whitish hairs, somewhat as in *E. egle* ♀.

Expanse of wings, ♂ ♀, 1.45 inches. Length of body, 0.55 inch.

HAB.—Owen's Valley, California. Described from one ♂ and ♀ in good preservation. In the form of the wings and general structure of the body, this species closely resembles *E. egle* and *E. oregonensis*, but the wings are narrower than in *E. collaris*. The color of the abdomen separates it readily from its allies found in the United States, though there is a very similar Mexican species with a rosy head.

Habits unknown.

COCHLIDIINAE.

LEUCARCTIA, Packard.

LEUCARCTIA ALBIDA, Stretch.

PLATE XL, FIGS. 4, 5.

♂.—White. Head and thorax white. Sides of the front next the eyes black. Palpi black, a little whitish below. Thorax beneath white. Antennæ black. Abdomen clear yellow-ocher above, except the apical segment and the basal hairs, which are white; beneath white. Each segment above has a transverse black spot. There is a lateral row of small black dots, and a faint indication of a sublateral row of the same color. Legs white above. Coxæ of anterior pair black, fringed with yellow hairs. Inside of femora yellow; those of the middle pair only partially so; those of the posterior pair only at the apex of the joints; tips all touched with black. Tibiæ of anterior and middle pairs streaked with dusky inwardly; posterior pair white. Tarsi dusky beneath. Wings pure white, both above and beneath; the anterior pair immaculate; secondaries showing faint traces of a discal spot and two submarginal spots. Expanse of wings, 1.20 inches. Length of body, 0.80 inch.

HAB.—Owen's Valley, California.

♀.—Unknown.

The specimen from which the description is given is in poor preserva-

tion, but may readily be distinguished from *L. acraea*, not merely by its smaller size and the absence of markings, which alone in such genera as this would scarcely warrant its separation under a specific name, but by the color of the posterior wings, which are totally different from the well known *L. acraea*. It may not be uninteresting to add that I have in my collection a ♂ exactly corresponding to the foregoing description, which I received from Costa Rica through Dr. Van Patten. This gentleman's collection was made in the table lands of the interior. I have also, from the same locality, a large *notodontid* (?), likewise identical with a specimen received from Arizona! When it is remembered that I am as yet acquainted with only five species of *Bombycina* from the district of Arizona and its vicinity, it is somewhat remarkable that two of these should be represented in a locality so widely removed as Costa Rica, and we may naturally look for many striking additions to our list of insects as we become more familiar with this as yet almost unknown country.

ZYGAENIDAE.

CASTNIINAE.

ARCTIA, Schrank.

ARCTIA DOCTA var. ARIZONIENSIS, Stretch.

PLATE XL, FIGS. 2, 3.

♂.—Head yellow-ocher; palpi black; antennæ brown; prothorax, patagia, and thorax somewhat hairy, pale whitish-yellow; the patagia each with a black dash and the thorax with a central black line.

Abdomen above pale vermilion; terminal segments black, beneath black, with a broad ventral pale yellowish stripe. Legs blackish; coxæ of anterior pair hairy, ocher yellow.

Anterior wings pale creamy-yellow, with the following reduced black spots: two basal streaks; three irregularly shaped angular subcostal spots, one of which is on the discal vein, one outside and one inside of the discal vein; two spots on the outer margin, one apical the other on the second meridian; a submarginal spot between the third and fourth median nervules; an elongated anal spot and a minute transverse spot on the submedian vein,

near the base. The middle subcostal spot is supplemented below the median vein by a very faint transverse streak. Fringes concolorous with wings.

Secondaries dirty white, thinly scaled, rosy along the inner margin, with a small blackish discal spot; a submarginal row of three blackish spots, the anal one small, the apical one extending from the costa to the first median nervule. There are also two marginal spots, one near the apex, the other about the middle of the inner margin.

Beneath as above, except that the fore wings are nearly white, and the costa of all the wings is decidedly yellow-ocher.

Expanse of wings, 1.60 inches. Length of body, 0.65 inch.

HAB.—Arizona.

Described from one ♂ received from my friend Mr. W. H. Edwards. The nearest ally of this beautiful species is *A. autholea*, Boisduval, which it much resembles. The number and location of the black markings in the primaries is identical, but they are much reduced in size. The chief point of difference is in the black markings on the secondaries, of which there is no trace in *A. autholea* ♂, while it may prove, however, to be merely a variety when we possess larger *suites* of these insects. It is at present sufficiently distinct to warrant a separate name.

ARCTIA YARROWII, Stretch.

PLATE XL, FIGS. 1, 2.

♂.—Head clothed with long black hairs. Thorax black, lemon-yellow outwardly. Abdomen black both above and beneath, densely and finely scaled, with an indistinct lateral row of crimson dots. Anal tuft silky, pale ferruginous. Legs black; anterior pair with crimson coxæ; in the middle pair the tips of the tibiæ and the femora are likewise crimson; on the hind pair the tips of the tibiæ and ends of the tarsi are also of the same color.

(*Note*.—The specimen from which this description is drawn has been pressed as flat as a botanical specimen, and the body parts do not admit of a more detailed description. The antennæ are wanting.)

Anterior wings velvety black, with very narrow fringes and markings as follows of clear lemon-yellow: five angular costal spots, of which the two nearest the base are quadrate; the third at the middle of the wing is

much narrower; all of these extend only to the median vein; the fourth is narrow, though wider than the third, and extends across the wing to the anal angle as an irregular band, being toothed outwardly about the middle at the point where it receives the termination of the fifth short irregular spot or band; below the submedian vein, near the base of the wing and opposite the costal spots 1 and 2, are two small, very reduced spots; and from the middle of the inner margin springs a very narrow, curved band, which unites with the middle of the fourth spot, forming with it and the fifth the usual terminal Arctian markings. The disposition of these markings is more like that of *E. caja* or *N. plantaginis* than any of the strictly American Arctians.

Posterior wings full, rounded, rather thinly scaled; basal half black, bounded outwardly by an irregular line extending from the basal two-fifths of the costa to the anal angle. Outer half orange-scarlet, inclining to orange near the apex. Fringes lemon-yellow. This outer half contains a small black spot on the discal vein, and a submarginal row of three larger black spots. The first of these lies across the interspace above the first median nervule; the second across, the fourth median nervule; and the third, on the submedian vein close to the outer margin. There is besides a very narrow marginal spot about the middle of the outer margin.

Beneath, the markings are reproduced; those on the primaries, especially near the apex, being broader and more diffuse. All the light portion of the primaries, except near the apex, are suffused with crimson; this color being most intense near the base and along the subcostal vein. The secondaries are somewhat paler, and there is a crimson streak on the basal third of the costa, which does not appear above. Expanse of wings, 1.75 inches. Length of body, 0.80 inch.

HAB.—Arizona.

♀.—Unknown.

This species, without exception the most beautiful of the American Arctians, cannot be mistaken for any other. It belongs to the section in which the veins are not clearly marked with a distinctive color. The body reminds one of *Epicallia virginalis*, Boisduval, the under wings suggest the ♀ variety of *Nemeophila plantaginis* with red secondaries, while the orna-

mentation of the primaries recalls *E. caja*. It is so unlike any of our other species of the genus that further comparison is unnecessary. It is with much pleasure that I dedicate this beautiful insect to Dr. H. C. Yarrow, the surgeon and zoölogist of this expedition, and to whom I am indebted for many kindnesses.

EPICALLIA, Hübner.

EPICALLIA VIRGINALIS, Boisd.

Two specimens were received from Arizona similar to var. *guttata*. but with rather more ochreous spots on the secondaries, and with the yellow spots on the secondaries rather larger in size than in Californian specimens.

MELANCHROIA.

MELANCHROIA? INCONSTANS, Hübner.

Melanchroia? inconstans, WALKER, C. L., B. M., 389.

Ardonia secreta, WALKER, C. L., B. M., 222, supp.

One specimen from Arizona.

ALYPIA, Hübner.

ALYPIA BIMACULATA, H. S.

Agarista Grotei, BOISD., Lep. Cal. (1868-69).

One specimen in good condition from Arizona, with the secondaries immaculate. The type of this species was from Mexico.

GNOPHAELA.

GNOPHAELA HOPFFERI, Grote, var. DISCRETA Stretch.

Var. DISCRETA, *var. nov.*

Two specimens which I have referred to the above species may possibly prove to be specifically distinct, though I prefer at present to consider them merely as a local variety. While resembling *G. Hopfferi* in form, they are nearer to *G. vermiculata*, Grote, in color, particularly on the secondaries. The most prominent difference is in the yellowish spot of the primaries, which lies on the discal area. In *vermiculata*, this is cuneiform, and reaches nearly to the base of the wing; in *Hopfferi*, it is quadrate, and does not extend back of the base of the fourth median nervule; while in *discreta* it is intermediate in form. These specimens were from Arizona, and neither of the previously described forms have yet been received from that Territory.