

BUTTERFLY NOTES.

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Euchloe lanceolata australis Grinnell.—Egg: Colour, when first laid, light whitish-green, but changing to orange and pale vermillion in several days' time; just before the larva makes its exit the colour is dirty brownish-yellow, particularly about the micropylar area; fusiform marked laterally with about sixteen raised vertical ridges, and finer cross veinlets between these; height about 1 mm. Emergence takes place in from four to seven days, the duration governed by weather conditions. On April 2nd, while collecting in Millard Canõn, near Pasadena, I observed a dilapidated ♀ *australis* ovipositing on a cruciferous plant, not yet determined, and carefully searching a number of these, I succeeded in collecting 31 eggs and 13 larvæ, the latter apparently all in the first instar. The eggs are variously placed as follows:

1. Eleven on under surface of leaves. In this case the eggs are seldom laid more than half way down the height of the plant, and are placed usually on the basal outer edge of the leaf, although in two cases I found them situated on the extreme edge.

2. On stem. Seven laid erect, at right angles with the stem.

3. Five on sepals of young inner buds.

4. Eight on various parts of the pedicel, but especially on the rachis.

I observed the ♀ oviposit three eggs on a single plant, but in different situations.

Young larva: Not distinguishable from the new-born caterpillar of *E. sara* or *ausonides*, Colour light orange-yellow, this becoming rapidly lighter; head small, almost black; dark coloured hairs scattered sparsely over the body. Length in motion, 1.1 mm.

Euchloe australis I would consider a good subspecies of *lanceolata*, differing at once therefrom in having the apical shading far intenser, and in the different coloration of the secondaries beneath. The size and shape of the apical bar, which Mr. Grinnell (CAN. ENT., p. 73, 1908) states in *lanceolata* is crescent-shaped, and in *australis* straight, has no taxonomic value, as in all our *Euchloids* this character is exceedingly erratic. The type locality of *australis* is Anoyo Seco Canõn and Millard Canõn, Pacific slope of the San Gabriel Mountains, Los Angeles County, California, and it ranges southward to Mexico.

E. lanceolata lanceolata flies as far north as Alaska. Its distribution through Oregon and Washington has not been apparently traced. Mr.

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Wm. H. Edwards gives Nevada and Arizona also, but I do not know any precise localities from either of these States.

Chrysophanus mariposa Reakirt.—I find in my note-book a brief description of the egg of this species, found adhering to the abdomen of a ♀ taken at Martina, Missoula County, Montana, in June, 1906. In this case, as I have occasionally noticed in various species, the egg was protruded while the ♀ was in the final pre-mortem state in the cyanide-bottle. The description may be transcribed to: Of the usual hemispherical form, marked with numerous, somewhat shallow, polygonal or semicircular depressions; colour a delicate creamish-green; it proved infertile. Lambert has observed oviposition on the stalk and under side of leaves of *Vaccinium* in Yosemite. Strecker, in his *Lepidoptera, Heterocera Rhopalocera*, p. 91, 1874, writes of *mariposa*: "Lower California. I have seen no examples of this except the original types now in my cabinet." But Reakirt, in his description of *mariposa*, (*Proc. Ent. Soc. Phila.*, VI, p. 149, foot note, 1866), gives California as the type locality. *Mariposa* is a strikingly distinct species, and, to my mind, one of the daintiest of the genus.

Calpodus ethlius Cramer (*chemnis* Fab., *obynthus* B. L.).—Mr. Wm. Schröder, of Los Angeles, bred three specimens of this tropical species from larvæ found on Canna in July, 1906. *Ethlius* is essentially a southern species, not uncommon in the Gulf States, from Texas to Florida, and has been recorded from New York, where the eggs, larvæ or pupæ were probably carried with the food-plant. In South America to Buenos Ayres, Central America, Mexico and West Indies *ethlius* is said to be common. The occurrence in California appears to be accidental.

Eudamus proteus Linn.—This species must apparently be added to the already long list of butterfly emigrants to California. Prof. J. J. Rivers has recently recorded it (*Proc. So. Cal. Acad. Sciences*) from the vicinity of Santa Monica, and Mr. W. S. Wright (*Journ. N. Y. Ent. Soc.*, XVI, p. 166, 1908) reports it as being fairly common about San Diego. Mr. Wm. Schröder took a good series of *proteus* several years ago in the garden of the California Hospital at Los Angeles, and it is said by other collectors to be abundant in the bean-fields near that city. Still another specimen was taken in an alfalfa field at Porterville, in Tulare County, August, 1904, by Mr. W. M. Davidson, giving *proteus* quite an extended range in this State. The food-plants, as in the east, appear to be leguminous plants.

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