

NOTES ON THE AMERICAN FORMS OF EUCHLOE, HUBNER.

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In answer to Dr. Butler's comments (CAN. ENT., XXXI., p. 19) upon my revision of the species of *Euchloë* (Bull. Am. Mus. Nat. Hist., X., pp. 235-248), I could state that Dr. Butler may possibly be right in considering *creusa* (var. *elsa*), *hyantis* and *lotta* seasonal forms of *ausonides*, but with the present knowledge it is not possible to place them so, and for this reason I concluded it would be best to allow the species to remain distinct until more light could be obtained on the subject. At any rate, I was certain that what we had labeled in our collections as *creusa* was not Doubleday and Hewitson's species, which Dr. Butler definitely asserts is my var. *elsa*. What seems to me strange is, how was it that Edwards did not recognize the figure of *creusa*, sent to him by Dr. Butler. *Creusa* (var. *elsa*) cannot be mistaken for either *hyantis* or *lotta* (so-called *creusa*). Doubleday and Hewitson did not give a description of *creusa*, and their figure of the species is unrecognizable, consequently has no scientific value. *E. olympia*, I can assure Dr. Butler, is not a *Zegris*, but belongs with *ausonides*. In the genus *Zegris* the head is very thickly scaled and the palpi are very short, while in *E. olympia* the palpi are long, and in all other respects it agrees with *ausonides* generically. *Cethura* and *pima* do not strictly belong to *Midea* as placed by me. Mr. Grote erected the generic name *Tetracharis* for *cethura* (Proc. Am. Phil. Soc., XXXVII, Jan., 1898, p. 37). In this paper, of which I had no knowledge when writing my own, Mr. Grote referred the American species, with orange blotch in the male, to *Euchloe*, with *cardamines* of Europe as the type, as proposed by Kirby, Scudder, myself and others. He further states that the white species of both continents are slightly more specialized and might be kept under the title of *Anthocharis*, consequently my conclusions, which were worked out independently, are the same as those of my friend Grote. Dr. Butler's remarks about the venation are practically the same as mine, only that he counts the veins differently. Mr. Grote has given excellent figures of the venation of *ausonides*, *cardamines* and *cethura*, to which the reader is referred. Dr. Skinner, in his recent catalogue of North American Rhopalocera, 1898, places *thoosa* as a synonym of *Reakirtii*. I can definitely assert that it is the female of *julia*. He also places *stella* as a synonym of *Reakirtii*, but it is the yellow variety of the latter.