

attempt to distinguish between *E. ausonides* and *E. hyantis* looks to me like a failure, not that they cannot be readily distinguished by size, form of secondaries, depth of ground-tint, and size of white spots on under surface, but because these differences are to be seen in undoubted seasonal variations in the European form, *E. ausonia*, and because if *E. ausonides* is distinct from *E. hyantis*, the Vancouver form, which differs in the pattern of the under surface, has an equal claim to separation. As regards typical *E. creusa*, which Dr. Beutenmuller considers to be *E. hyantis*, I can definitely assure him that the type (which we possess) agrees with his var. *elsa*. My idea of this species is that it can be arbitrarily sorted out into seven graded forms: *E. ausonides*, *E. var.* from Vancouver, *E. hyantis*, *E. lotta*, *E. coloradensis*, *E. creusa* = *elsa*."

In the same volume of the CANADIAN ENTOMOLOGIST (p. 56) Beutenmuller says: "In answer to Dr. Butler's comments upon my revision of the species of *Euchloe*, 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 strange to me 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."

It has been supposed that *hyantis* is the spring brood of *ausonides*, but Edwards (CAN. ENT., XXIV, p. 109) contradicts this, saying that *ausonides* is monogenetic, as he had bred a few typical examples in March. Last year, however, Mr. E. J. Newcomer and myself succeeded in breeding *ausonides* throughout all its stages, and a fair percentage of the pupæ emerged in early summer.² These examples were certainly not *hyantis*, and differed from the spring brood in being slightly larger and perhaps more yellowed. In order to straighten out this group, it will be necessary to breed out the various forms. I would like very much to

2. The fact that the European *ausonia* was 2-brooded and the American *ausonides* single-brooded, was one of the distinctions given by Edwards and Beutenmuller for distinguishing the two.