

period the primary form, together with *phaon* and *vesta*, had made its way southward, where all three are found now, and neither of them, so far as appears, having developed any marked varieties of the winter form.

[After this paper was written, and the first part of it in type, I received from Mr. Boll a fine series of *tharos*, *phaon* and *vesta*, from Texas, with the dates of capture accompanying each example. It appears that *tharos* there flies from February to November, and there must be in all six or seven generations during this period. Five of these are represented in the series sent. All the examples of *tharos* are of small size, resembling in this respect those from the far north. All, except the February examples, which are var. B winter form, are very dark above, the black intense and the fulvous deep red, and some of the males have the under side of the hind wings almost deprived of markings of any sort, and to a considerably greater degree than I have observed in more northern examples. But certain males labeled Sept., Oct., resemble surprisingly var. C of the winter form. I find the first of these phases, that of the plain wing, also in *phaon*, and among the examples of this species is a female labeled November, that is undoubtedly the winter form, var. B, and which would be expected to appear in February, after the winter. And this has led me to suspect, considering the effect produced on the Coalburgh larvae fed in the Catskills, as before related, that a cool season during the time the fall brood is feeding, or a few cool days after the chrysalis is formed, may tend to change the form of such of the butterflies as will emerge before winter, so that they shall not differ from those which pass the winter in chrysalis and appear in February. That may happen naturally which was brought about artificially with the Coalburgh brood spoken of.

I have also received a letter from Dr. Weismann of 16th Nov., 1876, which by his permission I may give in this connection: "Naturally your experiments with *tharos* have greatly interested me. The case seems to me perfectly intelligible; *marcia* is the old, primary form of the species, in the glacial period the only one. *Tharos* is the secondary form, having arisen in the course of many generations through the gradually working influence of summer heat. In your experiments cold has caused the summer generation to revert to the primary form. The reverting which occurred was complete in the females, but not in all the males! This proves, as it appears to me, that the males are changed or affected more strongly by the heat of summer than the females. The secondary form