

placing the chrysalids on the ice at regular intervals. On my return some had been exposed ten days, others but one or two, and I at once removed them and waited to see the result. After six or seven days (which is the usual period of the chrysalis of this species in midsummer), the *tharos* butterflies began to emerge, and as one after another came out quite unchanged, I found that the experiment with them was a failure. A week later the *ajax* chrysalids began to give butterflies, and as they had been exposed to cold some days before I left home, and while I was attending to the ice box myself, the result was better. Some were fully changed, var. *telamonides* emerging instead of *marcellus*, as would have been the case in nature; others were but partially changed, having the shape of *marcellus*, but the broad crimson anal band of *telamonides*; and others were not changed at all, but emerged *marcellus*.

Later, one butterfly only emerged from the chrysalids of *pseudargiolus*, a female, and it differs curiously from the type, and from other examples of the same brood which have emerged from the chrysalids not exposed to cold, in that the common series of extra discal spots on under side is wholly wanting, and the marginal crescents form a complete series across both wings and are very large and black, so that these crescents are more conspicuous than in any example I ever saw in the field. The other chrysalids are most of them alive, but the butterflies will not appear before next spring.

The failure of the *tharos* to change led me to test the ice box, and I found that as the ice melted the temperature rose from 45° to 55° in the top of the box. Very likely, also, in my absence, the cover had sometimes been left raised in such a way as to admit air.

Fortunately I had brought back from New York another batch of *tharos* eggs, also of var. *marcia*, obtained in the Catskills, and the larvæ from these I bred in June and July, and placed the chrysalids in the ice box at intervals as before, but this time at the bottom, under the ice, where I found the temperature to be 33°. I had scarcely gotten the last chrysalids in when I was compelled to go East again, and so lost the opportunity of determining the length of time required to effect a change of form, and being detained by the late railroad troubles, I did not return till twenty days had passed. The same day I removed all the tin boxes from the ice. They contained more or less water, and in some was enough to drown the chrysalids.

I divided the chrysalids into three lots. No. 1 contained all which