

THE REACTION OF LEPIDOPTERA AND THEIR LARVÆ TO HOT WEATHER

It is a fact that Lepidoptera and especially larvæ are not killed or even much bothered by the cold. This seems not to be the case with relation to heat.

I used to keep many different species of *Catocala* alive for three to four weeks for the purpose of egg laying. Most of my specimens I catch in bait traps. All the traps are hanging in shady places in the woods. I inspect the traps once and often twice a day. Last season we had a very long, hot, and dry spell, without any change for many weeks. It was at this time that I found all the captured *Catocala* dead in the trap and sometimes lying on their back with only some of their feet moving. Insects caught in traps die surprisingly fast, but they never died in time of eight to ten hours before. The moths were not killed or eaten by other insects or mice, as is usually the case for those dying in the traps. All were in good condition. With all the experience I have, I only can blame the heat for their death.

Also at this time I raised many hundreds of larvæ as: *Cecropia*, *Cynthia*, sphinxes, *Imperialis*, *Regalis*, and many others. All larvæ were raised up to the pupa stage outside on the trees, bushes or whatever their foodplant may be. The foodplants I enclosed with bags of different sizes. I reared them all successfully, except two species which were the largest larvæ feeding, *Eacles imperialis* and *Citheronia regalis*. In time of about three days I lost fifty per cent of both species. All were full grown about one day before pupation. I found the larvæ on the bottom of the bags either dead or almost dead. This happened at the hottest time of the season. The foodplant was never crowded with too many larvæ, which will sometimes cause diseases or death. The dead larvæ were all in perfect condition. They had no marks of any insect bites or stings, they were not discolored, nor showed any marks of any kind. They just died slowly. Many dead larvæ were successfully inflated for preservation, which is almost impossible with any other diseased or dead larvæ. I have raised many larvæ before, but these things never happened. We also never had a heat wave like this one before.

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CONCERNING *HEMILEUCA MAIA* IN WISCONSIN

Hemileuca maia (Drury) larvæ were first noticed crossing well-travelled Highway 23 in Marquette Co., Wisconsin, on June 25. Some were in the second and third instars; others were in last stage. The strip of road they were crossing was about one-eighth mile wide, and it ran through a marsh. One side had a heavy growth of Cattails and marsh grass; the other was filled with Alder, Willow, and Tamarack trees. As we were leaving for a collecting trip to Colorado that week, I did not try to collect any of the larvæ, though I had little hopes of finding any when I returned. On July 16 when I returned, my son and I went there and found them still crossing in large numbers. Many were crushed on the road. Most were in last stage. We took one hundred and ten.

In being reared at home they fed on Black Oak. The first larva pupated on July 25. From then on they pupated continually. On September 18 the first *H. maia* adult hatched. The following weekend on September 26 my son and a friend went to the marsh and took twenty. On the 27th we took seventeen. The next weekend, Mr. WILLIAM E. SIEKER of Madison came up; we then netted a total of eight. All these days were very warm, sunny, and dry. About ten of our pupæ have not hatched, by the end of November.

These notes may be of interest to other collectors; several have said they believed *H. maia* was very rare, if it could be found at all in Wisconsin.

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