

NEW HISTORIES AND SPECIES IN PAPAPEMA (HYDRECIA).

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Few will appreciate better than the author that the working out of life-histories in this genus is a greater contribution to entomological knowledge than the mere description of new forms. One gets quite a different idea as to what is truly representative from breeding the various species than from the random imago that is occasionally captured. These moths are unusually secretive, their flight and life being very short normally, so that their appearance in cabinets is rare compared to their number in nature. For example, *cerussata* is commoner, locally, than *nitela*, yet the former appears in a short interval, while the latter's emergence is for a lengthy, protracted period, and it is on the wing during the whole of September and October. So one will take at light fifty of *nitela* to one *cerussata* per season. With species having a concentrated appearance there is good evidence that a female never spreads her wings unfertilized, and it is known that their life after oviposition, which consumes three or four days at most, is hardly longer. It is a fact, too, with many specimens in collections which were taken in flight, that we find them undersized and ill-marked, being examples whose emergence was protracted past the normal date, or whose larvæ left their original burrows and completed their transformation in a more or less starved condition, and they little show what the species really should be like. A good illustration, occurs with *eupatorii*, the few undersized specimens which happened to be in collections were identified as *nelita*. So soon as the former is bred and a representative specimen comes to hand, no one for a moment would assign it to any previously-described form. And even with *nelita*, it has remained for breeding to definitely settle its identification.

These arguments are advanced to show cause for still another name, indicative of a species very widely distributed and which has been under observation in its early stages for seven years, and which finds in *Pteris aquilina* a plant commensurate to all its desires. So close, however, does it come to *Harrisii* as larva, and to *purpurifascia* as imago, with a balance of suggestion pointing to the former species, that to raise it to specific rank appeared superfluous. Yet efforts to prove it a variety fail, and the evidence in the field offers not the remotest clue to that end. The slight discrepancy from *Harrisii* seemed easily attributable to the difference in food-plant, and the question was closely studied. The latter