

unique in color, being greenish-yellow, but is not otherwise variant from usual form.

Another family consisting of twenty-five ♂s and thirteen ♀s, from eggs laid by one female, scarcely, if at all, surpasses the averages of the caught material as to expanse. The twenty-five ♂s show an average of only  $50\frac{1}{2}$  mm., while the caught males average  $51\frac{1}{2}$  mm. The thirteen ♀s average slightly larger than the caught females, 53 mm. against  $52\frac{1}{2}$  mm. As to pattern, the females present a rather more perfected type than the out-door average, but the males are scarcely equal to the natural average.

The relation found in these two bred families between the numerical proportion of the sexes and the degree of type development, lends some support to the hypothesis that favorable conditions during larval growth tend to a greater production of females, while less favorable conditions produce an increased outcome of males. The proportion of males to females in these two broods is in great contrast. The brood which shows such improved averages contains slightly more than an even share of females; and the family averaging scarcely up to nature's mean level contains a large overplus of males.

Additional to the direct evidence derived from inspection of the butterfly, there are several circumstances which add somewhat to the probability that *Elis* is a good species. Of some little weight, perhaps, is the argument from geographical distribution, that so far as known there is a great gap of country between the district of the form *Elis*, and the territory in which dwells *Meadii* proper. Should later discovery be made of *Elis* considerably further south, or of *Meadii* much more to the north than at present known, the probability of their distinctness would be somewhat lessened. Another and better argument is the inference from relative altitude. *Meadii* is normally an alpine butterfly, *Elis* is sub-alpine. All accounts agree that *Meadii* lives above timber, though like other alpine habitants, it may in peculiar circumstances make excursions to a lower level. Just such an incident may have originated *Elis*. One needs not an india-rubber imagination to suppose that somewhere in its mountain line of territory, under specially favoring conditions, *Meadii* may have established a colony below timber line. That accomplished, and the feeble colony proving able to maintain itself in the changed conditions, all the elements of the case would combine to speedily separate the new from the old, in kind. Perhaps hardly in any other way could