

upon this point, a solitary winged specimen was secured and confined in a box in which a sprig of the insect's natural food had been previously placed to satisfy its wants ; due examination having been made to the intent that nothing in the shape of food or animal life should stand in the way of a fair and impartial test. After the lapse of twenty-four hours, the inside of the box and its contents were examined with a glass of moderate diameter, and a single, newly-born Aphis was discovered fastened to a leaf stalk, in the act of imbibing its juice.

A further continuance of the feeding process for several days longer was productive of the same positive results. The rate of increase in this species, as shown by these experiments, unlike its European congeners, was proved to be but one a day ; so it is to be seen that the insect does not propagate as rapidly in this case at any rate, as naturalists have asserted. European species, we read, produce at the rate of three, four, and seven a day, according to eminent authorities. As our native American species differ in many points from European, in a structural as well as a functional sense, this difference in the rate of propagation may not be wondered at. From the above facts it does seem that nature has decreed that there shall be both winged and wingless specimens in the spring time, for it seems just to conclude that both varieties are virgin females. But other observations which were subsequently made, seem to foreshadow the existence of males also ; but the evidence upon this point is not of the most positive character, and requires further facts to settle it beyond the shadow of a doubt.

Having secured similar winged specimens a few days later, they were submitted to a like test, when both positive and negative results were reached. Here was a rather curious and interesting problem for solution. Why some should prove fertile, and others, which in no single particular differed therefrom, so far as could be determined, should manifest a contrary state of affairs was more than could be divined, and this too after frequent experiments had been made. If the latter are males, as their sterility would seem to indicate, the solution is self-evident ; but if of the opposite sex, there can be no adequate key to unlock the problem, unless the principle of excessive nutrition, which seems to account for so many strange things in the vegetable creation, should prove to be it. But even here a doubt arises, as observation has shown me that a succulent shoot produces almost invariably wingless specimens, while a less tender one the opposite variety. As the very existence of the two forms depends upon