

of this brood had apparently disappeared and all eggs had hatched. The first adults developing from this brood of eggs were noted June 10, and they continued to develop until the early part of July. The first eggs were deposited by the second brood of beetles about July first and oviposition continued until the early part of August. The adults developing from this brood of eggs began to appear in the latter part of July and continued to develop until late August, after which time, after feeding and copulating, they disappeared from the plants, having gone into hibernation.

Hibernation, according to Messrs. Leng and Davis occurs under the loose bark or in crevices in the bark, as they have found them abundantly in such situations on Staten Island. Mr. Leng states that while collecting *Parnidæ* in a pond at Bull's Head, Staten Island, he picked up a piece of willow bark in the water and found several specimens of this species attached to it.

It will thus be seen that there were three broods of beetles during the season, a hibernating brood which appeared in spring and continued in evidence during May, a second brood which began to be in evidence about June 10 and continued to appear until well along in July, by which time the third brood of beetles had begun to mature, and this brood continued in evidence until late August or early September. Thus there were two complete broods of insects in addition to the hibernating beetles. Owing to the fact that the insects apparently lived for some time after maturing, and that the period of oviposition of a given brood extended for some time, with a resulting irregularity in development, there was more or less overlapping of the broods.

It will also be noted from the foregoing record that it required about a month's time for the insects to mature, but this will probably vary a few days one way or the other depending upon conditions of temperature, food, etc. The length of the egg stage varied from three to five days, and the early stages of the larvæ were observed to occupy about the same length of time, while the period of pupation consumed two to three days.

The eggs of this species are laid in somewhat irregular masses, more or less circular or oval in outline and, almost without exception, on the underside of the leaves. Usually only one mass occurs on a leaf but occasionally there may be two, and they are situated