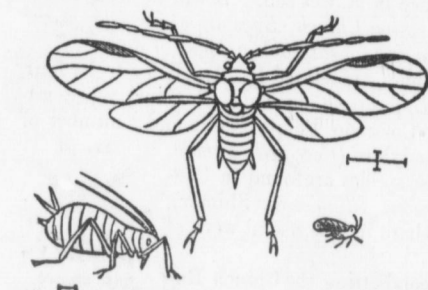


quite unsuspected; it is not at all unlikely, then, that we may some day have another visitation similar to that of 1861.

In our report of last year on "Insects affecting the Apple," (*First Annual Report*, page 77), we gave a description of the Aphis or plant louse that is often so injurious to the orchard, and made some remarks upon the general natural history of this singular family of insects. We need not, then, enter upon any further description of their extraordinary fecundity or other peculiarities. The Grain Aphis (*A. avenae* Fab.) differs from that of the Apple (*A. mali*, Fab.), Fig. 51, in little more than colour and food-plant; its structure and general appearance is much the same. When feeding upon the stem or leaves of the plant, the Grain Aphis is green; but when it shifts its quarters to the ear, and feeds upon the grain, very few green specimens are found, the great majority being yellow, reddish-yellow, or brownish-red.

FIG. 51.



The accompanying illustration (Fig. 51) representing a highly magnified winged male and a wingless female, displays the structure and shape of the insects. Fig. 52 represents a female on a still larger scale. They live at first upon the leaves, scattered about singly or in groups; afterwards, densely gathered together upon the stems of the flowers and heads of grain. Their food consists of the sap of the plant, which they draw out by means of a sucker or beak, on the underside of the head. They thus take away from the grain the elaborated sap which was intended to build it up, and so cause it to become more or less shrunk and deficient in size and weight.

When they occur in excessive numbers, they, of course, diminish the yield of grain very materially; but it is not often that they are so abundant as to cause appreciable loss.

FIG. 52.



As in the case of the Apple Aphis, the remedies for these creatures are chiefly those provided by nature. Artificial remedies, such as dusting with lime or sulphur, would be obviously impracticable in the case of a large field of grain; and even if feasible, the cost in time and labour would hardly be counterbalanced by the reduced inroads of these minute depredators.

FIG. 53.



The natural remedies consist of various carnivorous or parasitic insects, that prey upon plant-lice of all kinds. The most common and useful are the different species of lady-birds (Fig. 53); the Lace-winged Flies (*Chrysopa*), both in their perfect state (Fig. 54), and in their larval condition

FIG. 54.



Fig. 55); the Syrphus Flies in their larval state (Fig. 56); Fig. 57 represents a winged Syrphus Fly; Dragon-Flies, &c.; all of which should be heartily encouraged by the husbandman.

FIG. 55.



FIG. 56.



FIG. 57.



(Fig. 55); the Syrphus Flies in their larval state (Fig. 56); Fig. 57 represents a winged Syrphus Fly; Dragon-Flies, &c.; all of which should be heartily encouraged by the husbandman.

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