

# Common Garden Insects and Their Control

By ARTHUR GIBSON, Chief Assistant Entomologist

## INTRODUCTORY.

Garden plants are liable to attack by many different kinds of destructive insects. Some of these destroy the foliage, others the flowers, while others again bore into the stems and even into the roots.

The more the gardener knows about the insects which may attack his crops the better prepared will he be to cope with them when injury is detected. Every gardener, for example, should observe how the insects feed, as such fact will help materially in deciding upon the proper remedy to apply. Injurious insects may be divided, roughly, into two classes, by the nature of their mouth parts, namely, (1) biting insects which bite and chew their food, such as cutworms and other caterpillars, grasshoppers, leaf-feeding beetles, etc., and (2) sucking insects which suck up their food by means of their beaks, such as the aphids, the true bugs, the scale insects, etc. If the insect is a biting one a stomach poison, such as Paris green, or arsenate of lead, is usually applicable, but if the species is a sucking one, such poisons would be useless because the insect would insert its beak through the poison and reach a safe feeding place beneath. For sucking insects, therefore, contact insecticides are usually recommended, those commonly used being kerosene emulsion, whale oil soap and preparations containing tobacco (see pages 7 and 8).

There are some insects such as the borers, which cannot be reached by outside applications of spray material. Injury to plants by these insects which work inside the stems and roots, is often of a serious nature and should be met with preventive measures. Very often the only thing to do is to cut out the infested part if this is possible, or destroy the whole plant so as to reduce the numbers of the insect.

## PREDACIOUS AND PARASITIC INSECTS.

All the insects which occur in gardens are not injurious. There are many predacious and parasitic species which are continually assisting the gardener in destroying those destructive forms which do harm. Foremost amongst the beneficial insects are the different kinds of lady-bird beetles which, both in their larval and adult stages, feed almost exclusively upon plant lice and scale insects. The lace-wing flies, also, have similar habits. The Fiery Ground Beetle, *Calosoma calidum* Fab. and its grub, known as the Cutworm Lion, devour large numbers of cutworms. Of late years the Soldier Bug, *Perillus bioculatus* Fab. has been decidedly useful in assisting in the control of the Colorado Potato Beetle in certain parts of Eastern Canada. Other well-known beneficial insects belong to the parasitic Hymenoptera, (four-winged flies) and to the Diptera (two-winged flies.) The females of many of these latter parasites deposit their eggs upon or in the bodies of caterpillars and when the eggs hatch the young larvæ feed upon their living hosts.

## CULTURAL PRACTICES FOR THE CONTROL OF INSECTS.

*Vigorous plants more resistant to insect attack.*—Garden soil, of course, should be well prepared and such fertilizer as is advisable applied. Good seed only should be used so that vigorous plants will be produced. Cultivation of