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# ENTOMOLOGY

Edited by **Prof. E. G. Titus,** State Agricultural College.

If you do not find here what you want to know, write for it.

## WHAT IS AN INSECT?

**E. G. Titus.**

Someone recently asked me why I did not tell the Deseret Farmer readers "what an insect was." According to the definition we usually use, an insect is any animal possessing a body composed of three parts, the head, the thorax and the abdomen, six legs and usually one or two pairs of wings. The legs are fastened to the under side of the thorax and the wings to the upper side. Anyone can get a good idea of an insect in its full grown or adult stage by examining a grasshopper (one that can fly); a butterfly, or one of those moths that come in the house at night attracted by the lights; a beetle, one of the hard winged insects that also come to light in the house in the early spring; and the true bug, that is the squash bug, or an aphid (plant-louse). While each of these bugs have the parts slightly different, you will notice at the same time that they are decidedly similar.

The younger stages of insects are not quite so easy to separate into groups. But with the grasshopper, the squash bug and cabbage aphid the younger stages appear very much like the adult insect. While many other insects appear decidedly unlike their parents—the caterpillars, young bees and wireworms.

There is a way of classifying insects according to their manner of feeding which everyone will find of value. All insects, with some very rare exceptions are either biting insects or sucking insects. There is one very large group of insects which have biting and sucking mouth parts; this is the group to which belong the honey bee, the wasp, the ants and such things. In the class known as biting insects come the grasshoppers, the caterpillars, which are the younger stages of the butterflies or the moths and all of the beetles. The butterflies and moths are themselves sucking insects. The principal sucking insects with which we are ordinarily bothered are the squash bugs, the aphids, such as the green aphid and the cabbage

aphid, the bed-bug, the mosquitoes and some of the flies. While the mouth parts of all the flies are fitted for sucking not all are fitted to pierce through the skin of either plants or animals. The ordinary housefly gets its food by a way that is usually called "lapping it up," while the mosquito is possessed of a pair of saws in its mouth with which it cuts a minute hole in the skin and pushes its sucking tube through, using it as a pump to extract blood if it is feeding on an animal, and sap if it is feeding on a plant. It will be noticed in the above that most of the insects referred to are adults. There are a number of our injurious and beneficial species that do their best or their worst work in their younger stages.

It will be well now to tell something about the younger stages of the insects. Most of them hatch from an egg. But there are some very radical exceptions. The female of the San Jose scale never lays eggs, the young always being produced alive. The same is true of many of the aphids, and with many of the other aphids eggs are produced but once a year, while all the rest of the year the females, often called "stem-mothers" produce living young of the female sex only.

What is known as the larval stage of the insects is that part of their life from the time they hatch from the egg or are born until they become adults or pass into a resting stage known as the pupal stage from which the adult later issues.

This takes us back to another form of classification which was mentioned above, those insects which have more or less of the appearance of the adult throughout the younger stages, such as the cabbage aphid and those insects which are so totally different in their young stages that they are often considered to have no relation to the grown insect. Among those familiar to all of you are the caterpillar which turns into a butterfly or moth, the wire-worm which later becomes the snapping-beetle and white grub which makes the may-beetle or the June-beetles.

We will have some more about the insects, their relations and habits some other time, if you wish it.