

as those with which the farmer has himself to meet. These experiments are conducted in such a way that farmers can see just what is done, how it is done, as well as the object of the experiment itself. They can also see what results are obtained, and what we have done, under their conditions, they, under like conditions, can do for themselves; and the proof thereof is right before their eyes in their own fields. We find that these object lessons and personal contact are primarily worth vastly more than whole volumes of literature, and, gradually the farmer is coming to learn that there is help for him as well as for the horticulturist, in combatting insect pests, even though his acreage may be many times theirs and his crops radically different in nature.

ILLUSTRATED LECTURE ON "ANTS" (ABSTRACT).

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By way of preface the lecturer made some general statements in regard to the 5,000 known species and sub-species of ants, described the development and metamorphosis of the individual ant, the various castes, or polymorphic phases represented by each species and the function of each of these castes in the life of the colony. Then the general behavior of ants was treated from the standpoint of the three basic biological activities, namely reproduction, nutrition and protection.

Special emphasis was placed on the behavior of the female, or queen ant and her methods of establishing the colony in contrast with the behavior of the queen honey-bee and with the male ant, which takes no part in the activities of the colony as such, but functions only as a fecundating agency during the nuptial flight. The queen ant was shown to possess all the instincts of the worker forms in addition to some of her own and thus to represent the most complete embodiment or epitome of the species. This statement requires qualification only in the case of certain parasitic and slave-making species, in which the queen is degenerate like the queen honey-bee and no longer able to establish a colony and bring up the first brood of her offspring without the aid of workers either of her own or of an alien species.