

insect must fly from one tree whose flowers are shedding pollen to another tree whose flowers are in the first period of opening. In general the insect must fly from B to A trees in the forenoon and from A to B trees in the afternoon (see Figs. 3, 4, 6 and 7).

During 1932 in Florida a special effort was made to study the activities of honey bees in their visits to avocado flowers. Mrs. W. J. Krome and W. K. Walton obtained several hives for distribution in the groves and E. Morton Miller and various of the students of the Department of Zoology at Miami University made special studies of the activities of the bees. One important feature which they determined is that certain bees collect pollen only from avocado flowers while certain other bees from the same hive collect nectar only. It is certain that many individual bees that are active among the avocado flowers do not make cross-visitations. They are liable to work on a single tree. Also it should be recognized that those bees which collect only pollen confine their attention to trees in the second period of the daily alternation or to second-period flowers where there is overlap and in so doing they make few or no reciprocal cross-pollinations. The desired reciprocal cross-pollinations are made chiefly or only by those bees which collect nectar and which in doing this fly directly and repeatedly from a tree whose flowers are shedding pollen to a tree of another variety whose flowers are in the first period.

Furthermore, it is possible that the qualities of the nectar produced by different varieties influence the activities of insects. Nectar differs in color and apparently also in thickness and in amount. The differences in the flavor and the odor of the nectar produced by certain pairs of varieties may be such that individual bees may not collect from the two during any one period of work. Thus many bees, and other insects as well, may be very busy in collecting nectar or pollen and yet be effecting no reciprocal cross-pollinations.

It can readily be observed that honey bees do travel through avocado groves to a considerable distance from the hive but whether this is due to preference for some one variety or to some other influence is not known.

Possibly bees are more liable to make cross-visitations at times when the open flowers are relatively few, when bees are relatively numerous, and when other pasturage is scarce. At certain times bees may be attracted away from avocado flowers to other flowering plants, especially to nearby citrus trees or even to cover crops. Certainly avocados should not be inter-mixed with other fruit