Apis mellifera (the honeybee) is accepted to be an important pollinator in many agricultural crop systems in Hawaii; however, its contribution to pollination, along with other insect visitors, has not been determined for macadamia (Macadamia integrifolia) and coffee (Coffea arabica) orchards in Hawaii. Several aspects to determine pollinator contribution in a macadamia orchard and coffee orchard were measured: 1) species richness and abundance of insects visiting flowers in each orchard, 2) the effects of insect pollination in regards to fruit set, fruit retained, fruit size, and weight, and 3) pollen removal or transfer efficacy based on number of pollen grains an individual insect removed from or transferred to the stigma while foraging on a macadamia or coffee flower. Results concluded that while the order Diptera was highest in richness, A. mellifera was the most abundant species visiting the macadamia and coffee flowers. Flowers pollinated by insects resulted in higher fruit set, retention, and yield compared to flowers excluded from insect visitation. Coffee bean size and weight was increased with insect pollination. Abundance, coupled with foraging behavior and stigma contact suggested that honeybees were the greatest contributors to macadamia nut and coffee pollination over the other insects observed in the study orchards.