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Cicadas and Cicada Killer Wasps

CICADAS

On Long Island, summer brings the emergence of millions of Cicadas, commonly called Periodical Cicadas or annual locusts. The term "locust" is actually a misnomer because only certain species of grasshoppers are locusts, and grasshoppers (locusts) are not even closely related. The cicada is a sucking insect related to aphids, scales and leaf hoppers. Only in the Eastern part of the U.S. are these insects found and, in different sections, broods indigenous to those areas will emerge at different times. The Periodical Cicada emerges after several years of subsurface feeding on tree roots while the annual form appears after one year.

The adult cicada is a black and green-bodied, bullet-shaped, winged insect about 1 5/8" long. The nearly transparent wings have some strong veins. Cicadas have beaked mouth parts for piercing plant tissues and sucking the sap from the bark. They do not feed on foliage and adults do little damage by feeding. The injury they do inflict occurs during the egg laying process by the female.

Around late July through August, the immature cicada (nymph) leaves the ground and seeks out an upright object, ideally a tree, on which to cling. The nymphal skin splits and in about an hour a soft white adult emerges. In a few more hours, the adult becomes the winged dark-bodied, fully mature Cicada. Mating occurs about a week later, and several days after mating, egg laying begins. With her curved, saw-like egg-laying ovapositor, the female punctures the twigs of trees and shrubs, makes a picket in the wood, lays 24-28 eggs, moves on to another section and continues till she has deposited a total of 400-600 eggs. In 6 to 7 weeks, the eggs hatch into nymphs that fall to the ground and burrow into the soil till they find suitable roots from which to suck plant juices. The nymphs remain 18-24 inches beneath the surface of the soil, undergoing changes into the pre-adult stage. A few weeks before the end of the completion of their cycle, the nymphs begin to burrow upward in preparation for emergence from the ground.

The egg-laying process for the cicadas causes twigs and branches of small, immature trees to wilt. Fruit trees can suffer a heavy loss of fruit. Wounds resulting from the punctures permit entry of disease and insects (e.g scale, woolly aphids) into the plant tissue. Seventy to eighty different species of trees and shrubs are affected, especially oak, hickory, apple, peach, pear and grape.

Control

There are no practical controls because the adults are strong fliers with a long flight range and their host plant preference is so varied that detailed control recommendations are impractical. The cicada killer wasp is a natural predator of cicadas.

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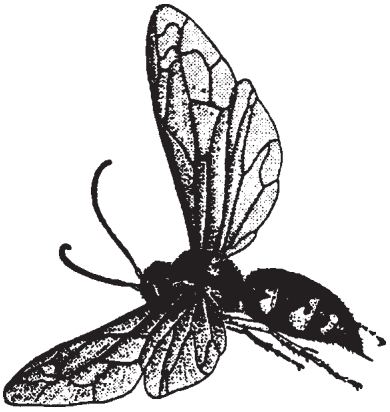
CICADA KILLER WASP



The cicada killer wasp, also known as the giant cicada killer, is one of the largest solitary, ground-burrowing wasps in the United States. It is found east of the Rocky Mountains and south into Mexico. The cicada killer is a very large, robust wasp about 30 to 40mm (1 1/8"-1 5/8") long. While the dirt mounds they produce can be a nuisance and their ominous size intimidating, these wasps are actually quite docile. They only sting when grabbed or threatened. Cicada killer wasps are the only known natural enemy of the cicada.

Habits

The cicada killer is commonly found in residential areas, city parks, golf courses and where privet hedges grow. They burrow in grass-covered or bare hills, banks and berms, along raised sidewalks, driveways, and patio slabs. They can be found in loose clay to sandy soils, and in loose soil in planters, window boxes, and flower beds. Sometimes the burrows are hidden under low shrubs and clumps of flowers, or in ground cover, such as ivy or pachysandra.

In late summer, these wasps are commonly seen skimming lawn areas and flying around shrubs and trees looking for cicadas. The wasps catch cicadas by paralyzing them with their sting and use them as food for their developing offspring: the adults feed on flower nectar. Once the cicada is paralyzed, the wasp drags it up a tree or post to gain height so it can fly back to its burrow. The wasp may have to do this several times with each cicada.

Wasps dig holes in lawns, kicking out a large horseshoe-shaped pile of dirt around the nest entrance. The burrow is about 38mm (1 1/2") in diameter and may be 15 to 25cm (6-10") deep and 30 to 45cm (12-18") long. At the end of the burrow are three or four cells. One or two cicadas are placed in each cell; one egg is laid on a cicada in each cell. Several wasps will frequently make individual burrows in one location. These wasps are strong fliers and will travel a considerable distance in search of food. During July and August, homeowners often report seeing them foraging, rather than burrowing, in the lawn. The female wasps rarely sting unless they are threatened by uninformed people, or lawn equipment in the nest area.

Control

These beneficial, predatory insects are a natural control for cicadas. They should be left alone and allowed to do their job - reducing the cicada population.

In certain sensitive areas such as playgrounds, entrance ways and around pools, killing a small number of wasps may be necessary. Aerosols for wasp and hornet treatment can be directed into isolated burrows and the immediate area surrounding the opening. This should be done after sundown. Wear protective clothing. Do not seal the burrows.