

## Cicadas

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Adult periodical cicadas, *Magicicada* spp., emerge in specific locations once every 17 years in the northern part of their range and once every 13 years in the southern part. Different groups called “broods” emerge somewhere in the eastern United States nearly every spring. They are most abundant in from mid June through early July. The next adult emergence in Wisconsin is expected in 2007. To ensure survival and subsequent reproduction, massive brood emergence occurs, overwhelming predators such as birds. Adult cicadas are black and have reddish-orange eyes and legs, and they have clear wings with orange veins that are positioned over their bodies like a roof or canopy. Male cicadas typically make a loud buzzing noise or squawk when disturbed, often producing a deafening noise when synchronized with other males.

The “dog-day” or annual cicadas appear during the summer days of July and August. These cicadas have two to five year life cycles, and their broods often overlap allowing some to appear every year. Dog-day cicadas are considerably larger than periodical cicadas, they have greenish bodies with black markings, and their wings have green veins.



**Dog-day or Annual Cicada**

**Plants Attacked and Damage** Periodical cicadas can damage trees from above and below ground. The most obvious damage is caused by egg laying on small twigs whereby damage results in the splitting of twigs which eventually causes death to the branch. This occurrence is referred to as “flagging,” it is especially serious on young plants (< 4 years old) since many branches are the preferred size, ¼ to ½ inch diameter. Large, established trees can withstand considerable flagging. More than 270 plant species have been reported as hosts for egg laying. However, some of the preferred tree species include apple, ash, beech, cherry, dogwood, hawthorn, hickory, magnolia, maple, oak, peach, and pear. In addition, preferred flower, vine, and shrubs include arborvitae, black-eye Susan, grape, hollies, junipers, raspberry, rhododendron, Rose of Sharon, spirea, and viburnum. Damage is also caused by nymphs (immatures) that suck sap from the roots of plants. Prolonged feeding by nymphs may reduce plant growth, fruit production, and ultimately lead to death.

Cicadas do not bite readily or sting, and they have no known toxic chemicals that they release. However, they are considered a nuisance by their abundance and loud deafening noise.

**Life Cycle** Periodical cicada nymphs or immatures develop underground, frequently damaging plant roots by sucking plant juices. After 13 or 17 years below ground, mature nymphs emerge from the soil at night and climb onto nearby vegetation where they pupate or transform into winged adults. As a result of this process, their shed outer skins or exoskeletons can be readily found attached to trees. Their emergence is relatively synchronized, with most nymphs emerging within a few nights. Adult cicadas only live for about two to four weeks, during which they feed relatively little. Male cicadas “sing” by vibrating membranes on the ventral or underside of their abdomen, females are incapable of generating sound. Male courtship songs attract females for mating. After mating, females lay their eggs in twigs  $\frac{1}{4}$  to  $\frac{1}{2}$  inch in diameter. Female cicada slice into wood and deposit one to several dozen eggs in one branch. Eggs remain in twigs or branches for six to ten weeks before hatching. Upon hatching, ant-like nymphs fall to the ground where they burrow down 6 to 18 inches to feed on plant roots. As periodical cicadas emerge during the spring, they frequently build mud tubes that project three to five inches above the soil. Such tubes are commonly mistaken for tubes that crayfish construct. Annual cicadas typically emerge from June through August, however their emergence is scattered over this period of time, consequently their emergence often goes unnoticed.

**Control** There are several different control options or tactics available for cicadas. If a periodical cicada emergence is anticipated, the postponement or delay of new plantings until late summer or fall, after the cicadas have died, may reduce the likelihood of egg laying and subsequent flagging.

Young trees in yards or small orchards can be protected with nylon netting during the egg laying period. Netting should be comprised of a mesh no greater than  $\frac{1}{8}$  inch, and should be placed over the trees when males are first heard singing. Such netting should be tied to the trunk beneath the lower branches, and may be removed after adult activity has ended.

Eggs can be removed by pruning-out or destroying young twigs that have been damaged or eggs laid in them. This control option must be implemented within a three week period after eggs have been laid.

Landscape plantings, nurseries, orchards, and yards should be scouted or monitored every two to three days during the cicada egg laying period to detect incoming females. If necessary, based on observed egg laying and potential flagging, insecticide sprays targeted against egg laying adults are effective. Because below-ground nymphs typically do not cause meaningful damage, soil applied insecticide applications are not suggested. However, if unacceptable root-feeding damage occurs, some insecticides are labeled and may be applied for control of nymphs.

**For pesticide recommendations:** See UW-Extension Bulletin A3597 or contact your County Extension Agent.

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