

# They're back! Periodical Cicada-Brood II- Coming in 2013!



Take a minute and drift back to 2004. The air was “a buzz” with the sound of the 17 year periodical cicadas. Male cicadas were drumming their abdomens, making noises that carried for miles. The female cicadas slashed

into branches to lay their eggs. At the peak of the flight activity of the cicadas, the bird population was getting plump from the bounty of insects to feed on. The eggs hatched in a couple of weeks and the nymphs dropped to the ground to burrow into the root-zone of plants to feed on tree roots for the next 17 years. We thought we were safe from the 17 year cicadas until 2021.

Periodical cicadas emerge in different geographical areas and these emergence groups are labeled as “Broods.” The one we experienced in 2004 in most of Maryland was “Brood X.” There is another brood of 17 year periodical cicada that will be emerging in 2013, and this is called “Brood II”. In most areas of Maryland you will not see these cicadas but if you have customers in Virginia, Pennsylvania, North Carolina, New Jersey, or New York they will be seeing activity of Brood II. The parts of Maryland that will have emergence are mainly in southern Maryland, Prince George’s County, and the lower portion of Montgomery County. In Pennsylvania entomologists expect to see Brood II emerge in the following counties: Berks, Bucks, Carbon, Chester, Dauphin, Delaware, Lancaster, Lebanon, Lehigh, Luzerne, Monroe, Montgomery, Northampton, Philadelphia, Pike, Potter, Schuylkill, and Wyoming. Periodical cicadas are found in eastern North America and belong to the genus *Magicicada*. There are seven species -- four with 13-year life cycles (including one new species described in 2000), and three with 17-year cycles. The three 17-year species are generally northern in distribution, while the 13-year species are generally southern and midwestern. *Magicicada* are so well-synchronized developmentally that they are nearly absent as adults in the 12 or 16 years between emergences. When they do emerge after their long juvenile periods, they do so in huge numbers, forming

much denser aggregations than those usually achieved by cicadas. Many people know periodical cicadas by the name “17-year locusts” or “13-year locusts”, but they are not true locusts, which are a type of grasshopper.

A few weeks before emerging in late spring, the nymphs of cicadas construct exit tunnels to the surface. These exits are visible as approximately 1/2 inch diameter holes, or as chimney-like mud “turrets” the nymphs sometimes construct over their holes. On the night of emergence, nymphs leave their burrows around sunset, locate a suitable spot on nearby vegetation, and complete their final molt to adulthood. Shortly after ecdysis (molting) the new adults appear mostly white, but they darken quickly as the exoskeleton hardens. Sometimes a large proportion of the population emerges in one night. Newly-emerged cicadas work their way up into the trees and spend roughly four to six days as “teneral” adults before they harden completely (possibly longer in cool weather); they do not begin adult behavior until this period of maturation is complete. Contrary to popular belief, adults do feed. Cicadas have a sucking mouthpart called a stylet. Adult cicadas will die within days if not provided with living woody vegetation on which to feed.

Adult *Magicicada* have black bodies and striking red eyes and orange wing veins, with a black “W” near the tips of the forewings. Most emerge in May and June.

You may say, wait a minute - I see cicadas every summer in August. Yes, you would be correct. The annual cicada, which are out in August every year, are a large green colored cicada and never reach really high populations numbers. They are also called “Dog-Day Cicadas” since they are in flight when the “Dog Star Cluster” is visible in the sky in August. Although annual cicadas’ life cycle is typically 2-3 years long, they are staggered so we see some emerging every summer. These late summer cicada species, which are sometimes mistaken for the periodical cicadas, are usually in the genera *Diceroprocta*. The annual cicada is more robust in

*(continued on page 14)*





(continued on page 13)

body size than periodical cicadas and body is a green color.

## Are they a Threat?

Cicadas do not bite or sting defensively, nor do they attack people. If a cicada lands on you, it is only because it finds you to be a convenient place to land. A good anecdotal story is that some lawnmowers and weed-whacker's motors may produce a sound that might be attractive to the periodical cicadas.

When handled, both males and females struggle to fly at first, and males make a loud defensive buzzing sound that may startle, but is otherwise harmless. Periodical cicadas are not poisonous to animals or humans, nor are they known to transmit disease. Adult periodical cicadas live only for a few weeks—by mid-July, all have disappeared. Their short adult life has one purpose: to reproduce. The males “sing” a species-specific mating song which to most humans is irritating din of noises. The cicadas produce this loud sound using their tymbals. Singing males of a single Magicicada species form aggregations (choruses) that are sexually attractive to females. Think of it kind of like holding a rock concert to get females to come into the area. Males in these choruses alternate bouts of singing with short flights from tree to tree in search of receptive females. When they get close to a female they sing another song and finally at mating they change to an even softer sounding song.

Periodical cicadas can cause physical damage to small trees or shrubs if too many feed from the plant or lay eggs in the twigs; such damage can cause “flagging”, or breaking of peripheral twigs. Orchard and nursery owners probably should not plant young trees or shrubs in the years preceding an emergence of periodical cicadas, because young trees may be harmed by severe flagging. Mature trees and shrubs, however, usually survive even dense emergences of cicadas.

In 2004, many homeowners purchased netting that they could cover small trees, but this was not a very practical solution since the netting is often blown off trees or entangled in branches.

Moles are said to flourish on the fully grown nymphs in the weeks prior to emergence. Other wild animals that enjoy the advantage include snakes and spiders. So, at least, some of nature's wildlife gets a benefit out of the nymphs that emerge from the soil.

Chemical sprays are really not practical to control the periodical cicadas. Beyond the concern by owners of fruit orchards and nurseries, periodical cicadas are not regarded as pests. Their loud noises may be annoying but tolerable since it only last for a couple of weeks. Just prepare your customers in Virginia, Pennsylvania, and southern Maryland for the activity this late spring to early summer.

## Why so Many?

When periodical cicadas emerge they do it in a big way, with a huge population saturating an emergence area. Magicicada population densities are so high that predators apparently eat their fill without significantly reducing the population (a phenomenon called “predator satiation”), and the predator populations cannot build up in response because the cicadas are available as food above ground only once every 13 or 17 years, depending on the species.

## If You Can't Beat Them, Try Eating Them

Cicadas are said to make good eating because they are low in fat and high in protein. There are over 3000 species of cicadas and they are considered a delicacy by many people in different parts of the world. The European settlers in North America observed some Indian tribe members eating cicadas. During the last

emergence of Brood X cicadas in 2004, a number of very brave (or just weird) people reported to have tried deep-fried and stir-fried cicadas. This is just for the adventurous people of the world or good for a “dare” at a cook-out. 🐛

*Stanton Gill, Extension Specialist, IPM and Entomology for Nursery, Managed Landscapes and Greenhouses, CMREC, University of Maryland Extension and Professor with Montgomery College, Landscape Technology Program  
sgill@umd.edu  
www.IPMNET.umd.edu*

