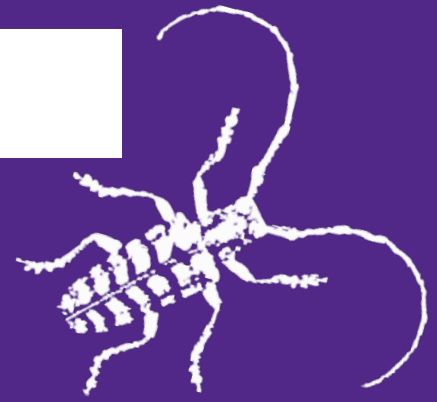


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News Corner

- 13 And 17 Year Periodical Cicada Emergence

NEWS CORNER

13 And 17 Year Periodical Cicada Emergence

Brood 19 (XIX) and 13 (XIII) of the 13 and 17 year periodical cicada, *Magicicada* spp., will be emerging from certain areas in a number of states in the Southern and Midwestern regions of the United States. Below is a table listing the states associated with the emergence of each brood.

Brood 19 (XIX) Of The 13 Year Periodical Cicada
Alabama, Arkansas, Georgia, Iowa, Illinois, Indiana, Kentucky, Louisiana, Maryland, Missouri, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, and Virginia
Brood 13 (XIII) Of The 17 Year Periodical Cicada
Iowa, Illinois, Indiana, Michigan (possibly), and Wisconsin



Figure 1. Periodical cicada nymphs emerging from the soil and crawling onto a tree trunk (Raymond Cloyd).

Periodical cicadas are insects with a 13 or 17 year life cycle depending on geography. Seventeen year life cycles are affiliated with the northern and western regions of the United States whereas 13 year life cycles are associated with the southern regions of the United States. Periodical cicadas have the longest life cycle of any insect, spending almost all their lives as nymphs underground that feed on the xylem (water conducting tissues) of plant roots. From April to June, millions of periodical cicada nymphs will emerge from

the soil in an area in almost “perfect synchrony.” The factors responsible for the synchronized emergence are still not well understood.

Each periodical cicada emergence is referred to as a brood with each brood represented by a Roman numeral. There are 30 broods. Seventeen year periodical cicada broods are designated I to XVII and 13 year periodical cicada broods are designated XVIII to XXX. Different species are associated with the 13 and 17 year periodical cicada life cycles. The four 13 year periodical cicada species are *Magicicada tredecim*, *M. neotredecim*, *M. tredecassini*, and *M. tredecula*. The three 17 year periodical cicada species are *Magicicada septendecim*, *M. cassini*, and *M. septendecula*.

Periodical cicada nymphs undergo five instars (stages between each molt). The early instars are translucent or cream colored, and resemble ants or termites. The later instars are over 1 inch (25 millimeters) in length and move through the soil feeding on the xylem tissue of plant roots for 13 or 17 years. From April to June, fifth instar nymphs emerge from the soil and crawl onto tree trunks (Figure 1), posts, or other objects. The nymphs remain stationary, and then transition into adults that emerge from the hardened exoskeleton of the nymph. These exoskeletons are present long after adult populations have declined (Figure 2). Adults are 1 to 1-1/2 inches (25 to 38 millimeters) long, black, with red eyes and legs, and have orange veined wings that are held roof like over the body (Figure 3). Adults are active for four to six weeks. In the first two weeks after emergence, adult females and males congregate at chorus centers, which are locations where males sing and mating occurs. Each mated female disperses from the chorus center and creates a series of slits or egg nests, using her sawlike ovipositor (egg laying device), along the length of 1/4 to 1/2 inch (4 to 8 millimeter) diameter twigs or branches of trees. A female can lay 20 to 30 eggs into each slit or egg nest, with each female capable of laying up to 600 eggs during her six week lifespan. Eggs are laid into the twigs or branches of a number of different trees including: ash, elm, hickory, and oak.

Nymphs emerge (eclose) from the eggs after six to 10 weeks and fall onto the soil surface. The nymphs then enter the soil



Figure 2. Periodical cicada exoskeleton of nymph where adult emerged from (Raymond Cloyd).



Figure 3. Periodical cicada adult (Raymond Cloyd).

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and start feeding on plant roots. Periodical cicada nymphs are the only insect known to feed on the xylem tissue of plant roots. The nymphs will remain in the soil for 13 or 17 years.

The main plant damage caused by the periodical cicada is associated with egg laying wounds created by females when using their sawlike ovipositor to lay eggs into twigs or small branches. Twig or branch dieback, or flagging may be noticeable later on in the growing season, especially on large trees, such as, oaks. Young, newly planted trees can be substantially damaged or even killed. For those interested, the next brood of periodical cicada to emerge in Kansas will be Brood IV (17 year life cycle), which is scheduled to emerge in 2032.

Raymond Cloyd – Horticultural Entomology/Integrated Pest Management

HOME

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