Cicada Serenade

Prepare for a spring-time chorus as the northern brood of the 17-year cicada emerges.

Story and Photos
By James E. Appleby

In the early hours of some warm evening in the months ahead, millions of nymphs of the 17-year cicada will make their appearance in the northern half of Illinois. There are five broods of periodical cicadas in Illinois; three have 17-year cycles and two have 13-year cycles, and it is the northern brood that will emerge in late May and throughout June.

Map adapted from L. Stannard, Cicadas of Illinois.

Immature cicadas, or nymphs, have spent 17 years in the soil where they have fed on tree and shrub root sap. In the spring of emergence years, nymphs construct tunnels to the soil surface, then make 0.5-inch exit holes. Some construct small mud chimneys around the holes.

On a warm night, millions of nymphs will emerge and crawl about seeking some type of vertical surface, such as a stout grass blade, weed stem, post, or, ideally, a tree trunk. With their powerful claws, they will clasp onto a vertical surface and begin the molting process.

A split will develop on the top of the nymph's head and extend down the back. Emerging from the brown nymphal skin will be the cream-colored, red-eyed, winged adult cicada. The 1.25-inch adult will remain stationary several hours until the soft body and wings are hardened and the adult colors emerge (black body and clear wings with orange-colored veins). Tree trunks, stems and leaves can be covered with numerous adult cicadas and their cast skins.

Female abdomens are slightly larger than the males, and are pointed with a groove on the underside that holds the ovipositor used in egg laying.

On each side of their blunt, grooveless abdomen, and just behind the attachment of the hind wing, males have a sound producing organ called the tymbal. At six days of age, males begin to vibrate their tymbals and produce a sound which some have described as a long, drawn-out version of

Cicada nymphs emerge from the soil (above). Large claws (right) help nymphs clasp onto an object during molting.

the word "pharaoh." On warm, sunny days, millions of males may be simulatenously "singing" to attract females, creating a nearly deafening sound.

A few days after mating, females search for live tree and shrub branches that are less than 0.5 inches in diameter. Using her ovipositor, she makes a slit in the branch and inserts some 20 eggs arranged in two rows. Numerous egg-laying sites are made by each female—it is estimated that each female may deposit from 400 to 600 eggs.

Both males and females feed on plant sap by inserting their needle-like mouth parts into small branches, but the feeding injury seems to cause no serious harm to branches. However, many tree and shrub species are injured when females lay eggs. About a month after eggs are laid, the outer 10-12 inch ends of tree branches will die. Oaks, maples, hickories, apples, crabapples, hawthorns, peaches, elms and sycamores are some of the more commonly affected species. Pines and spruces are not injured.

A female cicada deposits eggs in a branch by inserting her mouth parts into a twig.

This "natural pruning" on large trees is relatively harmless, although much of the aesthetic beauty is lost due to the numerous dead branches. Young trees less than 12 feet tall, and especially young orchard trees, suffer the most from the egg-laying injuries, setting back their growth and limiting fruit production for a few years.

To protect young trees during the three-week egg-laying period, place cheese cloth material over the branches as soon as the cicadas start singing. Consult with your local Extension office for any insecticides that may be used.

Adult cicadas have a life span of about five weeks. Predators (birds, snakes, raccoons and opossums) often feast on them, and a fungal disease kills some adults.

Eggs hatch about six weeks after deposit and the young cicadas drop from the branches to the soil, burrowing in and starting to feed on tree and shrub root sap. They continue to feed for 17 years, until the year of the next great emergence.

Cicadas do not harm humans, so it might be best that we simply endure their serenade and marvel at this long-lived insect.

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An adult cicada emerges from its nymphal skin.