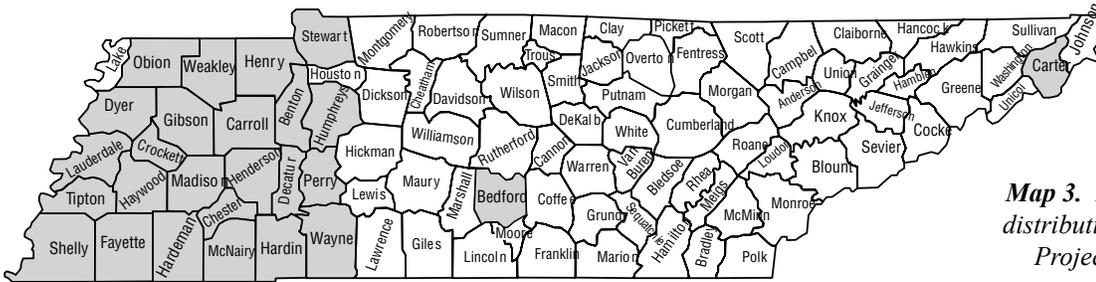


Map 2. Brood X, 17-year cicada distribution. Last emerged May 2004. No significant detections in Middle and West Tennessee counties in 2004.



Map 3. Brood XXIII, 13-year cicada distribution. Last emerged May 2002. Projected to re-emerge in 2015.

Common Misconceptions

There is much curiosity and superstition regarding cicadas. American Indians believed that the large cicada emergence had evil significance. Early American colonists were familiar with the Biblical story of locust plagues in Egypt (they had never seen periodical cicadas until the insects suddenly appeared by the millions). The colonists immediately thought a “locust plague” was punishing them. Today, people still confuse cicadas and locusts; cicadas are commonly called locusts. The term “locust” correctly refers to certain species of grasshoppers.

The large number of cicada adults that emerge often arouses fear that crops will be destroyed. However, adult cicadas do not feed on foliage. Adults may feed on twig sap to a limited degree.

The most immediate and noticeable damage results when females make injurious slits in twigs and limbs of trees as they deposit eggs.

It was thought that the distinct black “W” on the outer end of the front wings foretold of war. This mark is characteristic of these species and is caused by



Fig. 1. Adult Cicada
Bob Rabaglia,
Maryland Department of Agriculture,
www.forestryimages.org

deeper pigmentation on the veins.

Cicadas cannot sting; therefore, any story that mentions cicadas poisoning fruit by stinging is a myth.

Description and Life Cycle

The adult periodical cicada (Fig. 1) is 1 to 1½ inches long. The body is black and legs, eyes and wing veins are reddish-orange. Adults usually emerge in early May in large numbers when the soil temperature 4 inches deep is 67 degrees F. Four or five days after emergence, the males start “singing.” This high-pitched, shrill call is produced by two drum-like membranes on the side of the abdomen. The song serves as a mating call to attract females. Mating then occurs and females begin laying eggs. The female cicada has a knife-like ovipositor that she uses to slit twigs of woody plants. Apple, pear, dogwood, oak and hickory are favorite hosts; however, many others have been reported. In each slit, the female lays 24 to



Fig. 2. Damaged Twig
Jim Occi, BugPics, www.forestryimages.org

28 eggs. She then moves forward to cut another slit and deposits more eggs. This continues until five to 20 slits have been made in the twig; then she seeks another twig. Twigs or branches with a diameter the size of a pencil are most often damaged. Each female can lay a total of 400 to 600 eggs.



Eggs & Nymph
Lacy L. Hyche, Auburn University, www.forestryimages.org

Egg punctures made by the females can damage young transplanted trees in nurseries and orchards (Fig. 2). These punctures cause the twig tips to wilt and often die. The wounds serve as a point of entry or shelter for woolly apple aphids and other insects. Adult cicadas live for only four to five weeks.

Eggs hatch in six to seven weeks. The newly hatched nymphs (immatures) are white and ant-like in appearance. They drop to the ground and work their way into the soil until a suitable root is found. Nymphs grow slowly and their feeding (by sucking sap from the roots) has no noticeable effect on trees even where roots have been reported to be infested with thousands of nymphs. They continue to feed and develop until the spring of the 13th or 17th year (depending on the race). In May of those years, the nymphs burrow upward and leave the soil. This large emergence of nymphs usually occurs after sunset. Nymphs then seek upright structures, such as trees, posts and even weeds, on which to molt. The new adults emerge several hours later. At first, adults are

soft and white but become harder and darker in a short period of time. Adults then take flight, and the life cycle continues.

Adult Cicada Control

In areas with a previous history of high periodical cicada populations, certain preventative measures should be followed. In young fruit tree plantings, delay pruning fruit trees until after cicada emergence so damaged branches can be removed and a proper scaffolding of branches established. If pruning is done before the eggs hatch (five weeks or less after eggs are laid), burn the damaged twigs. When feasible, small valuable shrubs, trees and ornamentals may be covered with cheesecloth or tobacco canvas (spun row cover) for protection while cicadas are present.

Insecticidal control may be recommended where larger plants and areas of plants are involved. Carbaryl (Sevin, Carbaryl) can be used to protect ornamental plants from periodical cicada damage. Some of the brands of carbaryl can be used on grapes, blueberry bushes and most fruit and nut trees. Use Sevin (2 lb./gal. EC), Carbaryl 80 S (80% WP) or Sevin 50W (50% WP) on listed ornamentals. Repeat spray applications every five to seven days while adult cicadas are present. Do not apply carbaryl to producing apple trees within 30 days after full bloom, since thinning of fruit may occur.

Reference

Hyche, L.L. 1998. Periodical Cicadas (“The 13-Year Locusts”) in Alabama. Bulletin 635. Alabama Agricultural Experiment Station, Auburn University, Alabama.



Emergence
Bob Rabaglia, Maryland Department of Agriculture, www.forestryimages.org

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label. Persons who do not obey the law will be subject to penalties.

Disclaimer Statement

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

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