



CORNELL COOPERATIVE EXTENSION - SUFFOLK COUNTY

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Periodical Cicada Emergence Expected in Certain Areas of Suffolk County

This spring (2008) it is expected that homeowners located in certain parts of Suffolk County may be lucky enough to see the emergence of Brood XIV of the periodical cicada (*Magicicada* spp.) This often misunderstood insect is incorrectly referred to as a periodical locust or 17-year locust. Unfortunately this terminology is often used by the news media to sensationalize the emergence of these insects in the spring. Homeowners observing an emergence often become alarmed due to the high numbers of insects they may see emerging from the soil at one time. For some only a few insects may be observed and others may literally see hundreds of cicadas emerging over a period of a few days to a week or so.

Many of you may have probably heard the characteristic "buzzing" of what are called annual cicada during mid summer. These annual species are not developmentally synchronized in comparison to the periodical cicadas which are synchronized. So this means that almost all of them mature into adults in the same year. The fact that periodical cicadas remain locked together in time is made even more amazing by their long life-cycles of 13 or 17 years. Brood XIV which may be seen emerging this spring is one of several 17 year broods.



An adult periodical cicada. *Note the clear wings with orange veins and the striking red colored eyes.* (Photo courtesy of Lacy L. Hyche, Auburn University, www.bugwood.org)

Description: *Magicicada* adults have black bodies and striking red eyes and orange wing veins, with a black "W" near the tips of the forewings (refer to the two photographs). Most emerge in May and June.

Life Cycle: Cicada juveniles are called "nymphs" and live underground, sucking root fluids for food. Periodical cicadas spend five juvenile stages in their underground burrows, and during their 13 or 17 years underground they grow from approximately the size of a small ant to nearly the size of an adult. In the spring of their 13th or 17th year, a few weeks before emerging, the nymphs 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 after sunset (usually), 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. The cues that determine the particular night on which the nymphs emerge and molt are not well understood, but soil temperature probably plays an important role (Heath 1968).

After their short teneral period, males begin producing species-specific calling songs and form aggregations (choruses) that are sexually attractive to females. Mated females excavate a series of Y-shaped egg nests in living twigs and lay up to twenty eggs in each nest (Marlatt 1923).

After six to ten weeks, in midsummer, the eggs hatch and the new first-instar nymphs drop from the trees, burrow underground, locate a suitable rootlet for feeding, and begin their long 13- or 17-year development. But by the time that the nymphs hatch, the adults have died.

Are periodical cicadas dangerous? Cicadas do not possess special defensive mechanisms -- they do not sting or bite. The ovipositor is used only for laying eggs and the mouthparts are used only for feeding on twigs; thus, periodical cicadas can hurt you only if they mistake you for a tree branch! When approached, a cicada will simply fly away. If handled, both males and females struggle to fly, and males make a loud defensive buzzing sound that may startle but is otherwise harmless. Cicadas are not poisonous or known to transmit disease.

Management It is not recommended that homeowners spray their property trying to prevent the emergence of the cicadas. You may want to consider covering newly planted small trees with fine mesh plastic netting to prevent the females from trying to lay eggs in the small twigs of these trees. Although females can lay eggs in the twigs of large trees any damage in most cases will be aesthetic. Healthy trees should be able to withstand any damage associated with the egg laying.



Another view of an adult cicada. *Note the striking red eyes.* (Photo courtesy of Lacy L. Hyche, Auburn University, www.bugwood.org)

I was fortunate enough to observe Brood XIV emerging in several neighborhoods in Suffolk County back in 1991 (17 years ago). In 1991 most of the emergence of Brood XIV occurred in the last 2 weeks of May and then into earlier June. I suspect that a similar pattern will occur again this spring (2008).

In 1991 I observed and/or received inquiries from the following areas in Suffolk County:

Commack (Penguin Lane)

Coram (Pennaquid Road, Wycomb Court, Intersection of Rt. 83 & Rt. 112, Winside Lane)

Dix Hills (Athena Court, Aires Street)

East Setuket (Stalker Lane, Deer Lane, Campsite Lane)

Mastic (Abbott Avenue, Burney Street, east of Brookhaven Airport, Aberdeen Drive, Titmus Avenue, Moriches-Middle Island Road)

Manorville (Dayton Avenue, Moriches-Middle Island Road)

Miller Place (Tyler Avenue, Radio Avenue)

Port Jefferson Station (Starr Street, Norton Avenue)

Ridge (Leisure Knoll, Rolling Hills Drive, Medford Road, Bellaire Drive, Marc Drive, Old Saddle Road, Smith Road)

South Setauket (Stillhunter Lane)

Setauket (Antler Lane, Mayflower Lane)

If you observe an emergence of the periodical cicada this coming spring I would appreciate it if you would contact me and let me know the location where you are seeing the insects emerge. The easiest way to report an emergence would be to send an email stating your name and the address of the location where you made the observation. Providing a phone number where I can reach you is also helpful in case I might want to contact

you directly. My email address is twk3@cornell.edu . You may also contact me at Cornell Cooperative Extension – Suffolk County at 631-727-7850 x334. The Cornell Cooperative Extension – Suffolk County Horticulture Information Lines (631-727-4126 or 631-581-4223) are set up to answer inquiries as well.

You can also get much more detailed information along with numerous excellent photographs of periodical cicadas including many of the immature stages at Professor Chris Simon's web site <http://hydrodictyon.eeb.uconn.edu/projects/cicada/NA/Magicicada/index.html>. Chris Simon is a professor in the Department of Ecology and Evolutionary Biology at the University of Connecticut and a Professorial Research Fellow and Adjunct Professor at Victoria University of Wellington, New Zealand. She is also a research associate of the Bernice P. Bishop Museum, Honolulu, HI. From 1995 to 1998 she was a Senior Fulbright Research Fellow co-sponsored by Victoria University of Wellington, Otago University, and Massey University, New Zealand. I have worked with Chris in the past in those years when broods of periodical cicadas have emerged in Suffolk County.

Chris would also like individuals to report an emergence of Brood XIV on their new web site at <http://www.magicicada.org>. You will also find a lot of useful information on periodical cicadas as well as specifics on Brood XIV.

Information for this leaflet was obtained from *Periodical Cicadas*
<http://hydrodictyon.eeb.uconn.edu/projects/cicada/NA/Magicicada/index.html> .

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