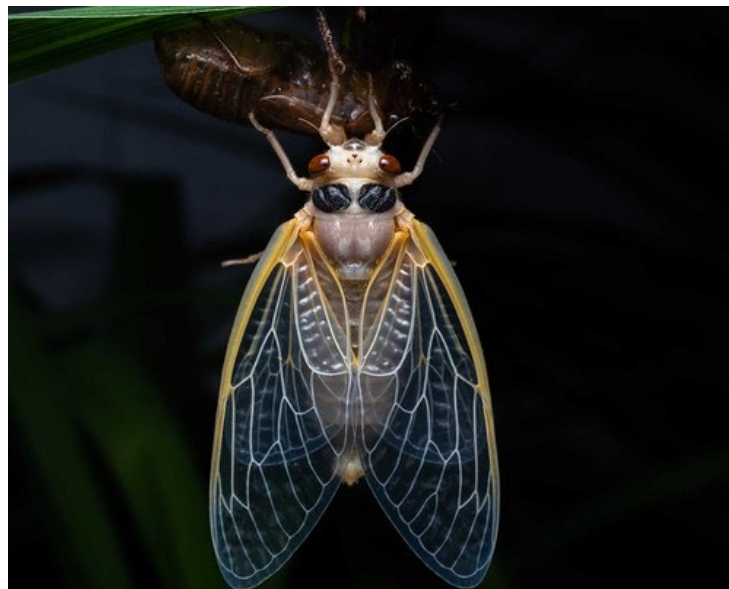




## Maryland Native Wildlife: Brood X Periodical Cicadas

April 16, 2021



*Teneral Periodical Cicada by Alex Andes-Gascon, DNR Photo Contest*

They're coming! Are you ready?!

This year, an exciting phenomena is going to occur in the eastern United States: the emergence of Brood X periodical cicadas. Brood X is also known as the Great Eastern Brood and is one of 15 broods of periodical cicadas that appear regularly throughout the eastern United States. This brood has the largest range and concentration of any of the periodical cicadas. It is made up of three different species of *Magicicada*.

For the last 17 years, Brood X cicada nymphs (juveniles) have been hanging out underground and feeding off of tree roots. Generally, these nymphs live about two feet under the surface and cause little harm to the trees. The nymphs go through five developmental stages known as instars, and the

fifth instar is the one that makes its way to the surface once soil temperatures reach around 64 degrees fahrenheit several inches down. This timing is usually late April through mid-May in Maryland.



*Periodical Cicada by Kerry Wixted*

The next stage of the periodical cicada's life only lasts for a couple of weeks and has one sole mission: to reproduce. Males will begin singing their hearts out with a species-specific song while receptive females will respond. After mating, the female will find young twigs and will make a V-shaped slit in the bark to deposit her eggs. Each slit will contain around 20 eggs, and one female will lay up to 600 eggs total! Sometimes, the process of making the slits in the tree will cause the branches to break and/or die. This dieback usually isn't an issue with mature trees that aren't stressed.

After 6-10 weeks, the eggs will hatch and the first instar nymphs will fall on to the ground, burrowing in the soil to start the cycle all over again.



*Cicada emergence holes by Dan Keck, Public Domain*

What does this emergence mean for your backyard? The Maryland counties slated for mass emergence are: Allegany, Anne Arundel, Baltimore, Carroll, Cecil, Frederick, Garrett, Harford, Howard, Montgomery, Prince George's and Washington counties. Much of the eastern shore likely won't get much action due to the sandy soils, but some periodical cicadas might emerge.

1. **You're going to see lots of holes.** The emergence holes are round in appearance and will be about the diameter of a dime. Sometimes, they appear to be mud turrets. In addition, raccoons and other animals are going to make larger holes digging up the soil. Consider this free aeration and cicada removal.
2. **Local wildlife are going to gorge themselves! Really!** Box turtles, northern flickers, raccoons, wild turkeys, foxes, and more are all going to be digging up these soil "shrimp" to eat. A lot of wildlife are going to benefit from this smorgasbord. Some articles have mentioned that copperheads are going to increase due to this emergence, but it isn't something to be concerned about. The periodical cicada strategy is known as predator satiation where so many prey (in this case, cicadas) emerge at once that it overwhelms predators and allows for some prey to survive to reproduce.
3. **It's going to be noisy.** Spending 17 years in the ground and having a short aboveground life means these cicadas really have to work hard to accomplish their goal of breeding en masse. Males will serenade us from early morning to late evening.
4. **You might lose some tree limbs.** The adults feeding on the trees won't really cause damage, but the egg laying may be an issue for some tree limbs. Some limbs will wither and die. Some limbs will break and die. A small number of limbs may also experience secondary infections. In the short term, the damage may seem like a lot but in the long term, most trees will bounce back the following year.
5. **You can help with cicada science.** Got cicadas?! If so, report them with the free [Cicada Safari application](#).





*A Northern Flicker enjoys a periodical cicada in 2021 by Bonnie Ott*

How can you co-exist with our noisy neighbors?

1. **Let them do their thing.** Seriously- embrace this magical phenomenon! One of my earliest insect memories was capturing scores of periodical cicadas in a bucket in 1987. I was so thrilled at their gentle yet clumsy nature. I was AMAZED and an instant cicada fan from that point forward. While some folks have reported being “pinched” by their mouthparts, this is not a common occurrence and their mouthparts are not something designed to bite humans. Engage youth with resources like the educational materials from [Be a Friend to Cicadas](#).
2. **Wait them out.** If you have plans to plant new shrubs or trees this spring and summer, then you may want to wait until Brood X has finished their adult breeding cycle. Small plants like seedlings likely won’t be affected, but it is always best to be careful.
3. **Protect some of your shrubs/trees.** If you have a special shrub or tree you don’t want to see damaged or just want to keep something safe then consider using a very fine mesh cloth like cheesecloth to wrap your trees for a month or so. Mesh sizes larger than 2.5 cm were not effective and neither were insecticides in a study by Hogmire et al. (1990). When considering netting for plants, it is important to note that wildlife like birds, snakes, and skinks can often get entangled in “bird netting”, sometimes with deadly results. Therefore, a fine mesh netting will reduce the number of accidental netting injuries or deaths while also protecting your plants.

#### References:

Clay, K., A. L. Shelton, and C. Winkle. Effects of oviposition by periodical cicadas on tree growth. *Canadian Journal of Forest Research*. 39(9): 1688-1697. <https://doi.org/10.1139/X09-090>

Cooley, J. R. 2021. The 2021 Periodical Cicada Emergence (Brood X). <https://cicadas.uconn.edu/> Accessed April 14, 2021.

Raupp, M. 2021. Return of Periodical Cicadas in 2021: Biology, Plant Injury and Management. <https://tcimag.tcia.org/tree-care/return-of-periodical-cicadas-in-2021-biology-plant-injury-and-management/>

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*Happy Spring HabiChat fans!*

*After what seems like the longest winter, I am happy to see signs of spring popping up in my local landscape. The queen bumblebees have emerged from their winter slumber. The ruby-throated hummingbirds are beginning to migrate back to Maryland. The trees are all starting to leaf out. So much is happening right now!*

*One big event slated for Maryland this year is the emergence of Brood X, the 17 year periodical cicadas. Learn more about these fascinating critters, what to expect, and their benefits with this season's article on cicadas.*

*Spring is also a great time to add native plants to your garden! This edition of HabiChat features golden ragwort, a native perennial which lights up gardens with a pop of yellow this time of year. Check out the [Maryland Native Plant Society website](#) for a list of local nurseries that supply native plants. This time of year is also a great one to tackle some of the invasive plants that may have found their way into your yard. Check out the [Plant Invaders of Mid-Atlantic Natural Areas](#) for information on common invaders and how to properly remove them.*

*This edition of HabiChat also includes an article on how to make your backyard owl friendly as well as a few new backyard books for 2021 and small blurbs on young wildlife in the garden and the current salmonella outbreak with feeders.*

*Finally, don't forget to check out our [Wild Acres webinar series](#). Each month, we feature different topics relating to Maryland's wildlife and natural resources. In June, we'll have guest speakers from the University of Maryland Extension and Calvert County to speak on topics such as forest succession and American kestrels.*

*Happy Habitats,*

*Kerry Wixted*

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