

VIRGINIA COOPERATIVE EXTENSION SERVICE

**VIRGINIA
TECH**

**VIRGINIA
STATE**

April 2, 1987

No. 163

PERIODICAL CICADAS

The 17-year Cicada Brood X will appear in Virginia this year. The counties of Alexandria, Augusta, (Carroll), Clarke, Fairfax, Fauquier, Frederick, Grayson, Lee, Loudon, Orange, Prince William, Roanoke, (Spotsylvania), Warren, Wise, and Wythe can expect to experience this insect in late April.

In Virginia there are a few species of "annual cicadas". They have a 4-7 year life cycle, but there are adults appearing every year because their life cycles are not synchronized. These cicadas are called "locusts", "harvest flies", and "dog day cicadas". Of course, they are not locusts (which are grasshoppers) or flies! The annual cicadas are insects that sit in the trees in late summer and make long, shrill sounds that seem to be natural of hot weather.

The annual or dog-day cicada is a large (1 1/2-2 inches), black and green insect--it is very robust and has green eyes. Dog-day cicadas appear in July and August.

In eastern U.S. there are several species of "periodical cicadas". They have either a 13-year life cycle or a 17-year life cycle. The 17-year cicadas are generally found in the northern states, and the 13-year cicadas have a southern distribution. Virginia has some of both varieties! Some periodical cicadas appear in large areas (=several states) at one specific location every 13 or 17 years. There are 13 broods of the 17-year cicada, and 5 broods of the 13-year cicada. These broods emerge in different years (fortunately!), and have different geographic ranges.

The periodical cicada is a small (1-1 1/2 inches), black insect with red eyes and reddish-orange wings. The adults of this cicada appear in late May and early June.

Life cycle. The life cycle of the periodical cicada is very long and very interesting. For years these insects remain under ground, feeding on the roots of trees and other large plants. In the spring of the correct year, thousands of them will emerge from the ground, shed their skins to become adults, and fly into the trees. For weeks the trees will be filled with these singing insects as the business of mating and egg-laying goes on. In a few weeks



INSECT NOTES



Annual Cicada



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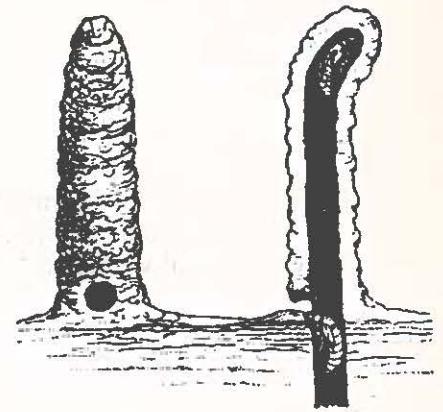
they are gone, but the scars on the tree branches where the eggs were inserted will remain. The eggs hatch in summer and the young nymphs drop to the ground and quickly burrow below the surface. They will spend the next 13 or 17 years feeding on the sap from roots of large trees and plants.

Immature stages. The eggs laid in the tree branches in June hatch in about 6 weeks. The small (1/2 inch), soft-bodied nymph drops to the ground and burrows beneath the surface. The nymphs do not ordinarily burrow into the earth below 2 feet, and most of them remain at depths from 8 to 18 inches. However, there are reports of their having been discovered 10 feet beneath the surface, and they have been known to emerge from the floors of cellars.

There are approximately six nymphal stages. All stages remain close to shrub and tree roots, sucking the sap with their piercing-sucking mouthparts. There is no evidence that the insects, even when present in great numbers, do any damage to the plants by their feeding. Sometime in April of their last year (13th or 17th), before the full-grown nymphs emerge from the soil, they come up from their subterranean burrows and construct a chamber just below the surface of the soil. The chambers are long and narrow, descending about 6 inches into the ground and about 1 inch wide. The upper wall of each chamber is separated from the surface by a 1/2 inch layer of undisturbed earth. This "cap" is not broken until the insect is ready to emerge.

A habit of the nymphs observed in some locations is the construction of closed earthen turrets as a continuation of the underground chambers. The turrets are constructed of mud and extended several inches above the ground.

Emergence. The period of emergence for periodical cicadas is late May. The nymphs leave their chambers in the ground in the evening (usually after sundown). After scooping away the soil to open the chamber, the nymphs crawl out of the chamber and head for any upright object close by (a bush, tree, post). Once the nymph has climbed up off the ground, transformation to the adult cicada begins. The soft-bodied, cream-colored adult will slowly emerge from the split in the top of the nymphal skin. It may take more than one hour for the adult to emerge, harden its skin and look like a cicada. By morning the young adult is ready and able to fly off and join the rest of the group.



Cicada Huts

The adult. The adult periodical cicada is robust, with a bulging face, and red eyes set out prominently on each side of the head. The body is black, the eyes red, and the wings are shiny transparent with orange-red veins. Each front wing is marked with a dark brown "w" near the tip.

Adult cicadas have piercing-sucking mouthparts, and feed on plant juices. They rarely cause visible damage to trees by their feeding. Perhaps this is because their attack lasts only a short time and comes at a time when the trees are very healthy.

The female cicada has a long, swordlike ovipositor for inserting eggs into twigs of trees and bushes. The ovipositor consists of two lateral blades; these blades are used to excavate a cavity in the wood for the eggs. The female may deposit 400-600 eggs.

Sound production. Male crickets produce their music (?) differently from those of the singing grasshoppers, katydids, and crickets. Female cicadas do not make a sound. Grasshoppers rub a part of a hind leg against a wing; crickets and katydids rub their wings together; male cicadas have a thin membrane at the base of the abdomen (under the wings) that is vibrated like the top of a drum. The sound is produced by moving this membrane in and out very rapidly.

Cicadas sing during the day and remain quiet at night. They usually sing in a group--everyone in a tree, everyone on the street, everyone in the county!--so the noise can be loud. The males sing to attract females for mating (so, what else is new!).

THE ASIAN COCKROACH

In the past several weeks there have been newspaper articles and radio features on a new cockroach pest that has appeared in central Florida. The cockroach is called the Asian cockroach, because USDA entomologists think that it was introduced into the U.S. from southeast Asia. This species looks very similar to the common German cockroach--small, brown, and with two distinct stripes on the back. However, the Asian cockroach lives outdoors--in shaded areas in turf--and can fly very well. The fact that it can occur in large numbers outdoors and fly have given this cockroach considerable pest status in the area of central Florida that it is now restricted to.

USDA entomologists have speculated that this species may spread as far north as Virginia and Maryland. Newspaper and radio journalists have taken this speculation and turned it into fact and prediction! This has stirred the interest and imagination of some of the homeowners in VA and MD, and that has turned into questions for Extension Agents. Let me try to give you my views on the Asian cockroach, specifically its potential pest status in this state.

- [] The Asian cockroach will probably not become distributed in northeastern U.S.
- [] This cockroach has not moved much in Florida, and should it begin to move out of its present range, there will be adequate notice.
- [] The Asian cockroach is not a "superroach"! In fact, this species is very easy to control with insecticides.
- [] The areas most likely to be infested by the Asian cockroach as it moves north are the coastal areas of the Carolinas. When that happens, we will know about it!

I am not in favor of feeding the fires of this story with more and more information to the news media. I have some information on the biology and habits of this cockroach if there are Agents that are interested. But I have discouraged newspapers and radio stations from promoting the "threat" of this new species!

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