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SP290-A-European Hornets Tapping at Your Window at Night

The University of Tennessee Agricultural Extension Service

UT Extension
SP290A

Insects

European Hornets Tapping at Your Window at Night?

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If you've seen hornets attracted to lights at night, most likely it is the European hornet, *Vespa crabro*. This species can be quite intimidating as they buzz and beat against lighted windows at night. They are very defensive, so be sure to maintain a safe distance between you and the hornet.

European hornets are very large, about 25 mm (1 inch) in length, with some individuals reaching 35 mm. This hornet is easily distinguished from other yellowjackets or hornets by the reddish-brown top and sides of the head; yellowjackets and bald-faced hornets have black tops and sides of the head with yellow or white markings. The front portion of the first abdominal segment is reddish-brown, the other portions of the abdomen have yellow markings, the wings are brownish and the eyes are red.

The cicada killer is a large wasp with colors similar to the European hornet, except it has a black abdomen with light markings. Cicada killers (see UT Extension factsheet SP341-F) are solitary wasps (do not have a nest of related individuals) that parasitize cicadas. Therefore they do not pose the same health threat as European hornets. The posterior edge of the pronotum is straight in the cicada killer and arched in the European hornet (Figure 1). See UT Extension PB1513 for drawings of other stinging insects.

This hornet's nest can be found in hollow trees, thatched roofs, barns, attics, wall cavities in houses, vacant rooms and bee hives. Underground nests are also possible.

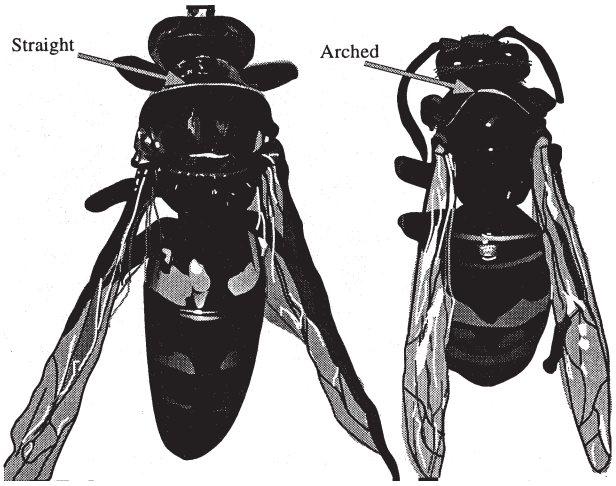

Figure 1. Straight pronotum of cicada killer (L) and arched pronotum of European hornet worker (R).

Nests built in unprotected sites (Figure 2) will be covered with a thick, brown envelope made of coarse, decayed wood fibers; those built in protected areas, such as hollow trees, will only have a simple envelope at the top (Figure 3).

In Tennessee, only the newly-mated queens survive the winter; the old queen, workers and males usually die by the second hard freeze. The new queen spends the winter in a protected site such as under bark, stones, shingles or in a vacant rodent nest. Queens (35 mm) initiate the colony

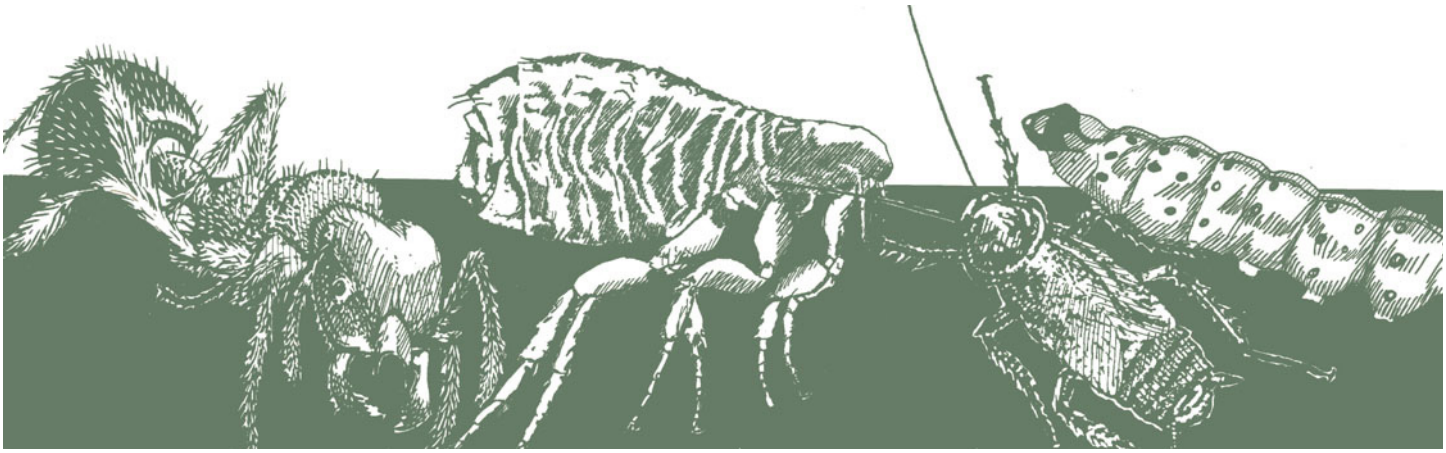

Figure 2. European hornet nest from unprotected site

in the spring, performing all the chores themselves including collecting material for nest construction, laying a small number of eggs, foraging and feeding the developing larvae. Once the first brood emerges, the queen's duties are confined to egg-laying, and the workers assume her other roles. Workers are infertile individuals that gather food and nest materials, expand the nest, feed the immatures, and defend and maintain the nest. Late in the season, 3,000 cells may be found in the 6 – 9 combs of the nest. On average, nests will contain 200 to 400 workers but may contain up to a thousand workers. Reproductives (males and virgin queens) are produced in the nest from August to November and have mating flights in the fall.

You may notice these hornets girdling branches of trees and shrubs like lilac, birch, ash, dogwood, rhododendron and boxwood. If no fibers have been removed, they are probably removing sap. To prevent further damage to woody ornamental plants by hornets, apply an insecticide such as carbaryl (Sevin) or others to the bark.

In late summer/fall, European hornets are highly attracted to orchards and feed on ripening or fallen fruit. This hornet is capable of excavating a hole in the fruit and consuming the contents except for the peel and core. Workers also prey on insects such as grasshoppers, flies, honeybees and yellowjackets.

Control

Prevention. Remove fallen fruit from orchards to lessen hornet activity. Seal holes in structures (knots fallen out of cedar siding, openings around wires, plumbing or conduit, etc.) to prevent hornets from using your home as a nest site. Insects do not respond as well to colors in the red end of the color spectrum; therefore, use yellow or sodium vapor lights outside entryways to avoid attracting these hornets to lights at night. It is much easier to eliminate a European hornet's nest in spring because the colonies are smaller. If these hornets are detected in the spring, search out the nest and treat as described below.

Locate the nest. Nests should he located and treated to provide long-term control. If the nest is not easily located, a ripe apple can be used as an attractant. After the hornets feed on the apple, follow them back to the nest or at least determine the direction of their flight. Move the apple

Figure 3. European hornet nest (18-inch diameter)removed from under attic insulation. Hornets entered the house through a knot that had fallen out of the cedar siding.

around until you can determine the nest location. Mark the ground near the nest so it can be located in the dark.

We recommend treating most wasps at night when all the workers have returned to the nest. Also, it is usually cooler so worker activity is slowed. However, this is not the case with the European hornet, which is active at night. Most workers may be found in the nest just before sunrise. Don a bee suit and veil (or other protective clothing and equipment including gloves) while it is still dark but just before sunrise. Use red cellophane taped over the lens of a flashlight to find the marked nest opening. Once the nest is located, apply insecticides into the nest opening. Following label directions, apply insecticides such as wasp and hornet aerosols, insecticidal dusts, sprays or foams.

If nests cannot be located, temporary relief can be obtained by spraying individual workers with flying insect or wasp and hornet aerosols. Aerosols containing tetramethrin are effective and work quickly.

Because of the defensive nature of these hornets, consult a pest management professional if you are concerned about stings.

For specific pesticide suggestions, see UT Extension PB1690 Insect and Plant Disease Control Manual at http://eppserver.ag.utk.edu/redbook/sections/structural.htm.

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.

Disclaimer

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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