



European Hornet

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Plants Attacked

Lilac, boxwood, viburnum, fruit trees, birch, willow, poplar, ligustrum, rhododendron, dogwood and other trees and shrubs.

Description of Damage

European hornets girdle smaller twigs and gnaw holes in the bark of larger branches to feed on the sap that flows from the wound (Fig. 1). Some of the bark fibers may be used for nest construction. Other insects, such as flies and sap beetles, may also be attracted to the wounds to collect sap, sometimes in large numbers.



Figure 1. European hornet girdling a twig (Louis-Michel Nageleisen, Département de la Santé des Forêts, Bugwood.org).

Girdled twigs may try to regrow, causing an abnormal swelling above the wound, but often the portion of the twig above the girdled area dies. Affected twigs and branches may show premature browning of the leaves in August and September before death. Plant damage is most extensive in late summer and early fall, when large colonies have developed and many workers are actively damaging host trees and shrubs. Although damage becomes

most noticeable in the fall, European hornets may have been removing bark and collecting sap for a month or longer.

Identification

The European hornet is a stout insect approximately 1 inch (2.5 cm) long (Fig. 2). The head and thorax are reddish-brown and hairy. The abdomen is yellow with brownish markings similar to those found on yellow jackets. The eyes and jaws are large. The wings are reddish-orange. The European hornet somewhat resembles the cicada killer wasp but is more robust and has more hair on the thorax and abdomen.

These hornets have a large, stout stinger and a large venom sac. Their sting can be very painful, but they do not appear to be particularly aggressive or vicious unless defending their nest.



Figure 2. Adult European hornet (Allan Smith-Pardo, Invasive Hornets, USDA APHIS PPQ, Bugwood.org).

Hymenoptera: Vespidae, *Vespa crabro*

Life History

European hornets build nests in protected areas such as hollow trees, hollow posts, partitions in sheds, barns, porches, and attics. The hornets construct the nests out of a papery material made by chewing wood and plant fibers. Mature nests generally consist of 6-8 horizontal combs. Nests in protective cavities or sheltered areas usually lack the papery covering found on nests in more exposed locations. European hornet nests in the southern US can be very large, up to 2-3 feet (0.6-0.9 m) in length, 20 inches (0.5 m) in diameter, and may contain 800-1000 workers. Most nests in Virginia are much smaller due to colder weather. Nests are annual and die out with winter temperatures. Fertilized queens will overwinter in protected areas such as under dead logs. A single queen establishes a new nest in the spring. At first the nest is small and has few workers, but grows in size over the summer.

Control

There is no insecticidal treatment for use on plants to protect against twig and bark damage by European hornets. Attempt to locate the hornet nest by following hornets in flight to and from the nest. Destroy the nest at night by placing an insecticidal dust into the nest entrance. Use a flashlight with a red light to limit attraction by the hornets and wear protective clothing to protect against stings. European hornets are active at night and will defend their nest.

These hornets are attracted to bright light at night, sometimes flying into screens and glass windows with an audible impact.

Remarks

The Japanese Hornet (*Vespa mandarinia*) has recently been reported from Washington and British Columbia, but this species is not known to occur in other parts of North America at this time. The Japanese hornet looks similar to the European hornet and there have been many instances of people misidentifying European hornets as Japanese hornets based on misleading information and pictures found on the internet.

Revised

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