CORNELL UNIVERSITY
MASTER BEEKEEPER PROGRAM

THE Bee-Files
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Ithaca, New York

Stinging Insects: Giant Hornets

Malcolm Storey, www.bioimages.org.uk

Common name: Giant hornets

Scientific name: *Vespa crabro*

Also known as: European hornet, Old World hornet, sand hornet, brown hornet

Size: 3/4 to 1-1/8 inch long

Commonly confused with: yellow jackets, bald-faced hornet

Distinguishing marks:

- very large
- head, thorax, 1st abdominal segment, and legs are reddish-brown
- remainder of abdomen is dark yellow with dark bands and small spots

Distribution: southern Massachusetts, south to Georgia, west to Indiana

Habitat: usually forests; sometimes in barns and other buildings

Life cycle: Giant hornets are social insects with an annual colony. Each spring, mated queens emerge from hibernation and start new colonies. Nests are often found under porches and in protected cavities, such as hollow tree trunks. The nest is constructed of chewed tree bark and mud. Worker hornets forage for other insects, such as caterpillars, to feed to the developing young. Although mainly a predator, these hornets will also eat sugary liquids, such as sap and fruit juices. Colony populations can grow to 1,000 individuals by the end of the season. Towards the end of the summer, males and new queens develop. After mating, the new queens find a suitable site to hibernate during the winter, typically in buildings or under loose bark. The workers, males, and the old queen perish in the fall. Nests are not reused.

Giant hornet in a defensive position,
Malcolm Storey, www.bioimages.org.uk

Inside a Giant Hornet nest, Robert W. Matthews The University of Georgia, www.insectimages.org

Damage: Hornets chew holes in ripe fruits, especially grapes and apples, to obtain sugar. They scrape off the tender bark of young deciduous forest trees to obtain construction materials and sugary sap. They may also raid honey bee nests. Hornets nesting in a home or other building may pose a stinging hazard.

Benefits: These hornets are voracious predators of other insects and may help control populations of harmful insect pests

Management: Colonies die each fall, and old nests are not reused. If present in a wall of a dwelling, do not plug the entrance, as the hornets will most likely chew a new one, possibly into a living area. If the hornets do not pose a threat, treatment may not be necessary. If they are nesting in a high traffic area and control is desired, seek professional help since there is a risk of being stung. For control, use an approved "Wasp and Hornet" spray that propels a stream of insecticide 15-25 feet. Treatment is most effective in the evening when the majority of the insects are in the nest. Be sure to dress appropriately. Wear eye protection, a long-sleeved shirt, trousers and boots, and secure your sleeves and pant legs. Establish an unobstructed escape route and be ready to move quickly away if any of the hornets fly towards you. If you require illumination, use a flashlight covered with red cellophane for light - hornets cannot see red. You may need to repeat the treatment two or three times on consecutive evenings.

Sting: These insects mostly avoid confrontation and will usually only sting if threatened. In the presence of a hornet, avoid rapid movements, blocking their flight path and vibrating or disturbing the nest. If you are stung, cooling the area with ice may be soothing.

Remember! Insect stings can elicit a life-threatening, allergic reaction in some individuals. Check with your physician to determine what symptoms require a visit to the emergency room. Never attempt any control measure if you have a known allergy to insect stings.

Giant Hornet caught in a net, Malcolm Storey www.bioimages.org.uk

Further sources: Akre, R.D., A. Greene, J.F. MacDonald, P.J. Landolt, and H.G. Davis. 1980. *Yellow jackets of America North of Mexico.* U.S. Department of Agriculture, Agriculture Handbook No. 552, 102 pp.

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