

# Community IPM

## How to Prevent the Buzz – Sting – Ouch! of Bald-Faced Hornets

Bald-faced hornets are social, stinging insects related to yellow jackets that house their colonies in large, enclosed carton nests. During summer months, these arthropods serve an important role as predators of flies, caterpillars and other soft-bodied insects to keep their numbers in balance. However, because of their ability to sting and a propensity to defend the nest, bald-faced hornets represent a public health concern when they live near humans.

### Identification

Worker bald-faced hornets can be identified by the large patch of white on their face, which serves as the basis of their common name. The abdomen is mostly black with white markings at the posterior tip. This hornet is the largest yellow jacket species in North America (at least 0.6 inches long), and can build nests containing hundreds of individuals. The single queen resides deep inside the nest, and is protected by a group of workers.

### Biology

Bald-faced hornets are common in both wooded and urban areas in the Northeast. The overwintered queen starts a new nest in the spring when the weather warms, typically late April or May. The queen scrapes loose bark with her mandibles and mixes it with saliva to form a smooth carton, which will hang from a tree, bush, low vegetation or occasionally on a building. This is the start of a small nest where the queen will lay eggs and take care of the resulting larvae until they pupate. The resulting workers will expand the size of the nest throughout the season as the queen continues to reproduce. At the end of the summer, the nest may be larger than a basketball.

Inside the carton are horizontal layers of comb divided into circular platforms. The outer carton layer is very thin, and can be easily stripped away if the nest is damaged. Animals or humans that disturb the nest can be attacked by a large number of aggressive wasps. Their stinger is not barbed, and each hornet can deliver multiple stings. Venom injected by the stinger is what makes a bald-faced hornet sting painful. Once a victim is stung, the best response is to leave the area as quickly as possible. Multiple stings often occur close to a nest.

In nature, bald-faced hornet workers are considered beneficial because they capture caterpillars and other insects, and bring them to the nest to feed the larvae.



Bald-Faced Hornet Queen *Dolichovespula maculata*.



Mature nest.

## Management

Early detection is an important part of bald-faced hornet management. Beginning in the spring (April to May), a visual inspection of overhangs and tree branches near your home can identify the start of a nest. The best time to take action against these nests is at night, when all colony members are present. With caution to avoid being stung, knock down the small beginning nest. Red-filtered light can be used to illuminate the area without alerting guards in the nest.

For larger nests discovered in summer months, it is important to consider if the nest is in an area of human activity, and if it poses a significant threat. Nests located away from human activity can be left alone, and problems with bald-faced hornets can be avoided by covering outdoor garbage receptacles and picking up dropped fruit under fruit-bearing trees. For nests located near human activity, extreme caution is needed. Summer nests can contain hundreds of workers that will defend the nest vigorously. Assistance from a pest management professional may be needed in these cases due to the risk of being stung and a possible anaphylactic reaction from bald-faced hornet venom.

At the end of the season, the carton nest often remains hanging from a tree, but the workers have all died and the newly mated queens have left the nest to over-winter in protected areas (ex. under the bark of trees or in fallen logs).

When working outside, wear foot protection and look for nests in trees and hedges before pruning.

## Summary

Bald-faced hornets are important natural predators, but can pose a health risk when found near human activity. Early-season scouting and removal of small nests can prevent problems with large hornet populations later in the year. This is the best way to protect yourself and others around your home, school or office from painful and/or dangerous stings.

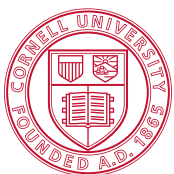
Prepared by Gary Alpert, Museum of Comparative Zoology, Harvard University.  
Photographs by Gary Alpert. Updated 2014 by Matt Frye, New York State Integrated Pest Management Program, Cornell University.



Initial enclosed nest.



Adult hornets emerge from pupal cases.



Cornell University  
Cooperative Extension



Produced by the New York State Integrated Pest Management Program, which is funded through Cornell University, Cornell Cooperative Extension, the New York State Department of Agriculture and Markets, the New York State Department of Environmental Conservation, and USDA-NIFA. Design by Karen English, New York State IPM Program. Cornell Cooperative Extension provides equal program and employment opportunities. © 2014 Cornell University and the New York State IPM Program. Posted 9/2014 at [www.nysipm.cornell.edu/factsheets/buildings/bald-faced\\_hornets.pdf](http://www.nysipm.cornell.edu/factsheets/buildings/bald-faced_hornets.pdf)

[www.nysipm.cornell.edu](http://www.nysipm.cornell.edu)