

## **Stinging Insects**

### **Part II — Subterranean, Tree & Wall Nesting Wasps & Bees**

#### **Introduction**

Most wasps and bees may be divided into two groups depending on their nesting habits. Those species which live in exposed paper or mud nests have been dealt with in Part I of this leaflet, Part II is concerned with those wasps and bees which nest underground, in hollow trees, or sometimes utilize man made cavities walls, foundations, attics, etc.). These insects live together and cooperate in many ways; they are social insects. Such groups, although beneficial often have a well-developed defense system; that is, they sting when disturbed. Thus effective identification and extermination sometimes becomes necessary.

#### **Bumblebees and Yellow Jackets**

Bumblebees are large, "furry", yellow and black insects (sometimes tinged with orange) often seen visiting flowers. These bees are not particularly aggressive, but will sting if their nest or entrance is disturbed. Their small nests are often built in abandoned mouse holes, and for this reason they are most commonly encountered in field situations, but may also be found in mattress or insulating materials. Bumblebee nests are annual and only reproductive females (queens) overwinter.

Yellow jackets, commonly mistaken for bees, are actually shiny, yellow and black wasps. In New York State these insects are annual nesters. Every spring, reproductive females start nests in small ground depressions and cavities. The only evidence of such a nest is a small ground-level entrance. Yellow jacket nests are usually not discovered until their populations are near their peak in late July or August. Disturbing a nest at this stage can be quite unpleasant and even dangerous. It should be noted that these wasps will often adopt cavities within the foundations or walls of houses. Foragers from late season Yellow Jacket nests can number in the thousands and sometimes become a nuisance in backyards and picnic areas. Yellow Jackets capture flies and other insects to feed their young, and also seek out flower nectar and other sweet liquids. Generally insect foragers are less aggressive than those individuals at the nest site.

#### **Management of Ground Nesting Wasps and Bees**

Insecticides such as Carbaryl, Baygon, Malathion and methoxychlor are recommended for control. These products may be purchased in convenient aerosol form for outdoor use and are generally labeled as wasp and hornet killers. The insecticide sprays are most effective when applied in the early evening when all of the individuals are in the nest. Cool temperatures (below 60 degrees F.) are also helpful since they slow nest activity. Examine the nest during the daytime so that you will be familiar with its location that night. The aerosol sprays differ in their effective range, so always read the directions.

Spray directly into the entrance hole of the wasp or bee nest for maximum effect. A flashlight may be helpful but its use should be restricted since light may disturb the insects. If the insects begin to emerge from the nest, simply walk away from the area and return later. Remember to watch for stunned or dying insects on the ground. Patience will prevent accidents. Two insecticide applications are best for Bumblebee and Yellow Jacket nests. The second spraying should be performed approximately one hour after the first, but you may wait until

the following night. If no activity is observed the day or so after treatment the area may be considered relatively safe. However, Pupal Bees in the nest may continue to emerge, and activity sometimes begins again after a week or so. Keep an eye on the area for a few weeks after treatment. Sometimes an additional treatment is necessary.

## Honey Bees and the European Hornet

Honeybees, our most numerous pollinators, are relatively small hairy insects. They vary in color from the usual golden brown to darker browns and even black. Honeybees cause concern under two circumstances. 1) The box-like hives used by hobby and commercial beekeepers can become too crowded for a given colony of bees, and a group of bees (a swarm) will leave to start a new colony. Frequently such swarms settle temporarily on the side of a house or on a tree branch. Swarms are discussed in Part I of this fact sheet.

2) Oftentimes, however, a group of bees will start a new hive in a hollow tree, or within the walls of a house. These permanent homesites cause the greatest problem. Honeybees tend to defend their new home against any inexperienced intruder. Honeybee nests are perennial. These insects survive the winter by huddling together forming a tight, warm cluster.

The European hornet, *Vespa crabro*, is a large heavy-bodied wasp. It is brown in color with yellow and orange markings. This species was introduced into North America in the mid-1800s. Its biology is quite similar to that of the yellow jacket, but it prefers hollow trees as a nesting site. It will also accept manmade cavities especially the outside walls of houses. The nests of this species are annual and only a small number of queens overwinter. The European hornet is unusual in that it often flies at dusk and even into the early evening. For this reason it sometimes becomes a pest near outdoor lights and on window screens.

## Management of Wasps and Bees Nesting within a Hollow Tree

Removal of a nest within a hollow tree is usually not necessary. Nest entrances are often well above the ground and cause considerably less danger than ground nesting species. If, however, the circumstances necessitate removal, the following points should be recognized before attempts are made. 1) Hollow trees often have several entrances and exits. 2) If at all possible, pesticide application should be accomplished from the ground. Some aerosols have directed sprays with an effective range of several yards. 3) Any stored honey or comb from an insecticide-treated nest **should not be consumed**. 4) Honeybees reuse and seem to prefer abandoned nest cavities. The cavity itself should be removed or sealed after the inhabitants have been destroyed.

The nest of the European hornet is annual. All inhabitants should be dead or quite dormant during the winter months. The hollow portion of the tree may often be removed with relative ease during this time.

## Wasps and Bees Nesting within the Side of a Building

Insects are extremely adept at finding holes in even the most well built house or garage. It is often difficult to remove nests from the side of such a building. The standard insecticide application technique mentioned previously may be used but with considerable more caution. During the application insects are often driven into the building, especially around windows and in attics. This must be avoided at all costs. In the case of wasps there are two alternatives: 1) Wait until the late fall and seal all nest openings. At this time the colder temperatures should have killed all the nest inhabitants with the exception of a few overwintering queens. 2) Call on professional help in the form of a pest exterminator. With honeybees, however, the problem becomes more involved and costly. One may wait until the temperatures drop to near freezing or below and slowly expose the next allowing the cold weather to kill the unprotected bees. Beekeepers will sometimes attempt a hive-trapping technique that removes the adult bees with the exception of the queen and a small number of workers. This technique, however, should not be attempted without experienced supervision. Trapping a hive takes approximately two months and it is not always successful. In most cases, a professional exterminator is necessary for the removal of a colony.

