

Controlling Honey Bees Around the Home

Introduction

Though there are many kinds of insect pests in the world, the honey bee is uniquely beneficial to human welfare. Not only does it produce honey and wax, but more importantly, the honey bee pollinates many crops that we depend on for food. The three major groups of crops that require or benefit from insect pollination are fruits, vegetables, and certain seed crops. About one-third of our total diet comes directly or indirectly from insect-pollinated plants. Of the insects that pollinate crops for humans, the honey bee is the most important.

Honey bees, therefore, should not be killed except when absolutely necessary. Because of their defensive stings, however, honey bees may not always be welcome in homes.

Honey Bee Identification

The honey bee is about $\frac{2}{3}$ inch long, with yellow and black or brown bands across the abdomen. The body is covered with hairs. Because the honey bee is similar in appearance to some wasps, it is often blamed for stings by social wasps such as yellow jackets, paper wasps, and hornets. One difference is that wasps can sting repeatedly, while the honey bee stings only once and leaves its stinger at the site of the sting. The honey bee is not aggressive and stings only for self-protection. Worker, queen, and drone bees are illustrated in Figure 1.

The honey bee is the only stinging insect that can establish a *permanent* nest in a house or hollow tree. Honey bee colonies are large, numbering from 15,000 to 60,000 bees.

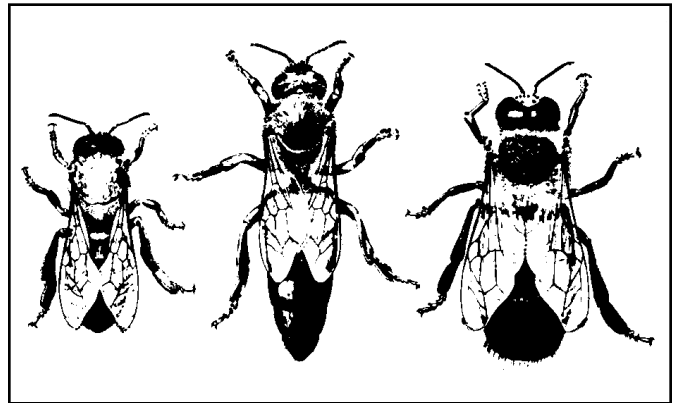


Figure 1. From right to left, worker, queen, and drone bees

Control of Bees in Swarms

In spring and early summer, a honey bee colony may divide itself by swarming. This is the natural way honey bees increase their colony numbers. About half the worker bees and their old queen will leave their nest to begin a new colony. A swarm will cluster temporarily on a tree branch or other object for a few hours or for several days and will then enter the wall of a building, a hollow tree, or some other cavity to establish a new nest.

Swarms are not usually a problem unless disturbed. It is often best to leave a swarm alone and let it depart on its own. If it is in a place where the bees present a danger to humans or animals, call your county Extension agent, police department, or fire department for names of local beekeepers who may want more bees and be willing to remove the swarm for you. If no one will agree to remove it, the best alternative is to call a commercial pest control operator.

Bees in Buildings

It is best to take action as soon as possible after bees enter a building. The colony quickly begins to build combs of wax in which to rear young bees and store honey. In a fairly short time, there will be a considerable amount of wax and honey and a large number of bees in the colony. This means that it is usually preferable either to trap the bees out or to open the wall and remove the entire colony, alive or dead. If the bees are killed in the wall, they may cause a disagreeable odor for some time. Honey may seep out through the walls, causing a serious problem.

If you are able to remove the entire colony, paint over the nest area, fill the nest cavity with insulation, then seal and paint all entrance holes. Otherwise, another swarm may smell the old nest and move in.

Control measures are usually more effective in the late winter or early spring when honey stores and colony population are at their lowest levels. Keep in mind that the combs that bees live in may be some distance from the entrance hole through which they enter and leave the nest. This means that an insecticide applied at the entrance may not make contact with the nest at all and can complicate the procedure of opening the wall to remove the colony.

You can often locate a nest by tapping on the outside or inside wall at night and listening for the buzzing of the bees. Since bees keep the brood area of the nest at about 95 degrees F, you may also be able to feel the warmth of the nest through an inside wall.

Removing Bees Alive from a Building

The entire colony can be removed either through opening the wall of the building or by trapping the bees. **Caution! To work with live bees, you will need protective clothing—a bee veil, gloves, long sleeves, long pants tucked into boots, and a bee smoker.** It's best to have an experienced beekeeper perform the task.

If you can, remove the siding, and cut out all combs. Place the good combs containing brood and honey into frames placed in a hive positioned at about the same location as the main flight hole. Scoop, brush, or use a modified vacuum to move all clusters of bees into the hive. Most of the bees that fly will enter the hive. During the next day, move the hive at least 2 miles away. Kill any remaining bees, using an insecticide. Paint over the nest area, fill the nest cavity with insulation, replace the siding, and close and paint all openings.

If it is not practical or desirable to remove the siding, bees can be trapped. This procedure requires at least 30 days and may not always be successful.

1. Make sure there is only one hole that allows bees to enter or leave the building.
2. Using window screen wire, make a funnel or cone about 18 inches long. The big end of the funnel should be large enough to cover the flight hole and taper off to the little end with an opening $\frac{3}{8}$ inch in diameter.
3. Secure the big end of the funnel tightly over the flight hole.
4. Attach a temporary scaffold to the side of the building to support a hive containing one or two frames of unsealed brood, bees and honey, and several frames of empty combs.
5. Place the hive so that the hive entrance is near and at a right angle to the little end of the wire funnel. When the bees return, they will attempt to enter at the big end of the wire funnel, which covers the flight hole. Eventually, they will give up on reentering the old nest, and most will go to the hive.
6. Check the area frequently for alternate entrances that the bees might have made in response to the screened entrance. Figure 2

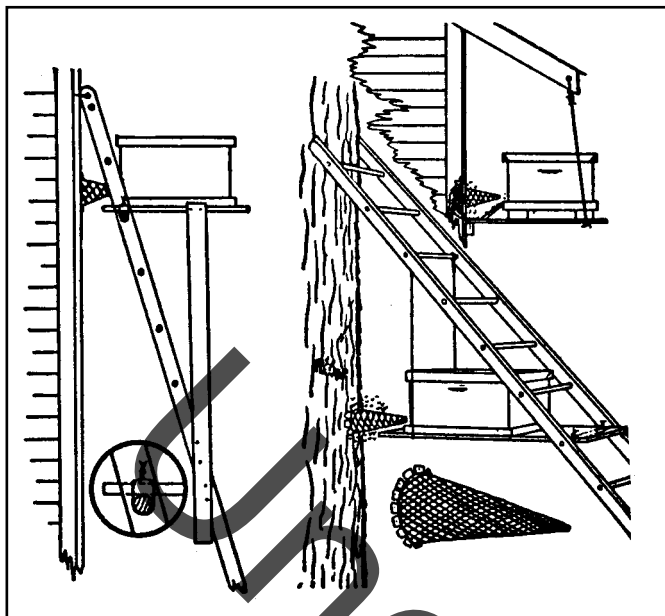


Figure 2. Arrangements for using a wire screen cone to trap bees from buildings or trees into a hive (Courtesy of A.I. Root Co., *The ABC and XYZ of Bee Culture*, 1966.)

shows several arrangements for trapping bees from buildings or from trees.

7. Leave the hive in place for at least 1 month so that most of the bees that are developing in the nest will complete development and leave the nest.

8. In about 6 weeks, if no new holes have been discovered, most of the bees from the old nest will be in the hive. Remove the screen wire funnel. Put about 1 tablespoon of powdered sulfur into a lighted bee smoker, and puff the fumes into the original flight hole. The sulfur fumes will kill any bees remaining in the old nest if the fumes reach them. Or, you may let the bees die a natural death. **Caution! Sulfur fumes may cause some cloth and metals to tarnish. Be careful! Don't set the building on fire!**

9. The next day, smear a little honey around and in the original flight hole to encourage the bees from the hive to rob out the honey in the old nest and store it in the hive.

10. Wait about 2 weeks or until the robbing has stopped, and then seal up the original flight hole.

11. Wait until night when all the bees are in the hive, and move it 2 miles away to a permanent location.

Using an Insecticide

Insecticides are the safest and most satisfactory materials for killing bees in buildings. Do not use fumigants or other poisonous or flammable compounds. Use an insecticide in the form of a dust or aerosol instead of spray because the dust or aerosol will circulate in the wall cavity better than a spray will. A spray may be used if it can be applied directly to the bees. However, a spray may damage interior walls, ceilings, and furnishings if applied improperly.

Effective insecticides formulated as dust include 5% carbaryl (Sevin) and 5% malathion. An effective insecticide formulated as an aerosol is 1% resmethrin (Whitmire Prescription Treatment 110 Aerosol Generator). Follow directions on the insecticide container label.

Apply the insecticide at night when all the bees are in the nest. Close all holes except the one through which the insecticide will be applied to the nest. Make sure none of the bees can gain access to occupied rooms. Apply the insecticide through the flight hole if the nest is fairly close to it. Otherwise, drill a suitable hole through the wall just above the nest, preferably from the outside, so that the insecticide may be directed onto the nest.

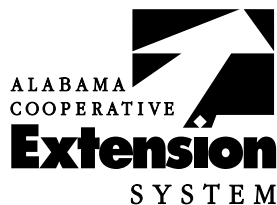
In most cases, one application to the nest will be sufficient. However, if the colony is very large or the nest very extensive, it may be necessary to treat a second time in 7 to 10 days. Check the main flight hole 7 days after treatment. If there are no bees flying from the hole and there is no buzzing when the wall is tapped sharply, it is probably safe to assume the bees are dead. When the nest location is exposed in the attic, the insecticide may be applied in the attic. Do not allow the bees to escape into occupied rooms.

Another technique that works in some situations is to put the insecticide dust in a heavy-duty brown paper bag. Place the paper bag inside a plastic bag. In the evening after all bees have entered the nest, tack the open edges of both bags tightly around and over the bees' flight hole. Make $\frac{3}{8}$ -inch flight holes through the upper corners of the bottoms of both bags. The colony will gradually be killed as the exiting bees die from pesticide exposure and food stores stop coming into the hive.

A colony located in a chimney may also be killed with an insecticide. Fit a piece of cardboard or other suitable material over the fireplace so the bees and insecticide cannot escape into the house. If the nest is located near the top of the chimney or in the fireplace, conventional equipment may be used to apply the insecticide; otherwise, special equipment will be required to ensure that the insecticide reaches the nest. Don't try to burn honey bees out of a chimney. A serious fire could be started because the wax will burn almost like oil. Kill the bees first, and then cut or knock down the combs, using a weight attached to a wire or rope.

Caution! The dead bees and the insecticide-treated honeycomb are attractive to other honey bees and are toxic to both bees and people. Dig a hole, and bury dead bees and all of the comb under at least 18 inches of soil. Do not leave the honey and comb where other bees can reach it, or you may damage valuable honey bee colonies or other beneficial insects living nearby.

The procedures and techniques for controlling bees in hollow trees in yards or recreation areas are essentially the same as those for buildings.



ANR-179

James Tew, Beekeeping Consultant for Auburn University, Associate Professor, Entomology, The Ohio State University

Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label.

The pesticide rates in this publication are recommended **only** if they are registered with the Environmental Protection Agency and the Alabama Department of Agriculture and Industries. If a registration is changed or cancelled, the rate listed here is no longer recommended. Before you apply any pesticide, check with your county Extension agent for the latest information.

Trade names are used **only** to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

Issued in furtherance of Cooperative Extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, and other related acts, in cooperation with the U.S. Department of Agriculture. The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability.

UPS, 15M07, **Revised Sept 1998**, ANR-179