

Bug-Wise

No. 8

July 20, 2010



Office: 1-662-325-2085

Dealing with Problem Honey Bees: Because of the honey and wax they produce and the pollination services they provide, honey bees are normally considered beneficial insects. However, when a colony establishes a hive in the walls or eaves of the house, or in some other undesirable location, this 'good insect' quickly becomes a major pest.

There are two situations in which large numbers of honey bees may invade the home or yard. The first is when a swarm of bees settles on a tree limb in the yard or on some exterior part of a building. Swarming is the way honey bee colonies reproduce themselves. The old queen leaves the hive, taking about half the worker bees with her. Most swarms will not travel far before alighting and clustering on a tree limb or some other structure, forming a hanging, roughly basketball-sized mass of bees. During the day there will usually be many bees flying about the mass. Normally, a swarm will remain at such a location for only one or two days, while scout bees search for a suitable hollow protected site in which to establish a hive. Then the entire swarm will fly to this new nest site and move in.

The key point here is that swarms are only temporary and will usually leave on their own in a day or two. If a swarm has settled in an out of the way place where the bees can be avoided and left undisturbed for a few days, one approach to dealing with the situation is to do nothing and hope it will go away on its own. This is one of those rare situations where this approach usually works! Swarming bees are generally much less aggressive than bees in an established colony. However, swarms are unpredictable and some can be irritable and quite aggressive, so people and pets should be kept well away from swarms.

It is possible that a swarm that is allowed to leave on its own may move to a location where they are not wanted and the potential for this should be considered when deciding how to deal with a swarm that has settled in the yard. If your home or out buildings offers easy access to potential nesting sites, the 'leave them alone till they go away approach' may not be appropriate. However, you should also consider whether the time and effort that would be spent dealing with the bee swarm might be better spent in sealing and plugging potential access holes. After all, there will be other swarms, which will also be sending out scouts to search for suitable nesting sites.

The second situation occurs when a colony of bees actually establishes a hive in a wall void, soffit void, chimney, or some other part of the house or other building. Unless they are killed by diseases, mites, or excessive heat, these types of honey bee problems will not go away on their own. Once honey bees move into a nest site and establish comb and brood, they are committed to a long-term stay.

Control Methods: What options does a homeowner have for dealing with these types of honey bee problems? As previously mentioned, most swarm clusters will probably leave within one or two days. However, swarms that are resting in a sensitive or high-traffic public area may have to be dealt with immediately. The quickest and best solution to this type of problem is to contact a local pest control company and have them come destroy the bees. Nobody likes to kill honey bees, but sometimes, it has to be done. It may take a few phone calls to find a company that does this type of work, but those that do will have the appropriate protective equipment and insecticides, and will usually be able to respond quickly.

Another option is to find a local beekeeper who is willing to come capture the swarm. However, this may be much more difficult than you might think. In past years, beekeepers were often happy to catch swarms as a way to increase their number of hives. Today many beekeepers will be concerned about the potential for feral swarms of bees to be infested with diseases or mites that they do not want to introduce into their bee yard. Also, there are justifiable concerns about the liability of dealing with a swarm of bees in a heavily trafficked public area. In addition, swarms do not always settle in easy to reach locations, and many are simply more trouble than they are worth from the beekeeper's perspective. Still, some beekeepers are willing to capture swarms, and this is certainly an option that is worth exploring. A beekeeper who is willing to undertake the task will have the necessary knowledge and protective equipment. County Extension offices, local police and fire departments sometimes maintain lists of local beekeepers who are willing to capture swarms.

Eliminating a colony of bees that has already established a hive in a building is considerably more difficult than dealing with a swarm. Again, the best option is to hire a pest control company to come kill the bees. Professional pest control companies that do this type of work will have the necessary knowledge, insecticides and equipment to accomplish the task. Often a pest control company may have to make one or two follow-up visits in order to kill all bees at a nest site. Be prepared to pay for these return visits, in addition to the initial treatment.

After all of the bees in the colony have been killed, it will then be necessary to physically remove the dead bees and the comb containing the honey and brood from the void and seal the entry point. Failure to do this will result in further problems. In particular, if you do not adequately seal the entry points, you will probably have another colony of bees in this location! Also, the dead bees and brood can result in unpleasant odors and can attract other insect pests, such as carpet beetles, ants, and wax moths. Finally, without the bees to keep it cool, the comb will usually melt, resulting in honey leaking out in other locations of the house. (Note that honey from bee colonies that have been killed with insecticides, or honey that is leaking from voids in walls or other locations, is not suitable for human consumption!) Few pest control companies are willing to do carpentry work, so it will usually be necessary to hire a local handyman or do it yourself.

Occasionally, one can find a local beekeeper who is willing to come remove an established colony of bees from wall voids or similar locations. However, because of the time and work involved, this is something that most beekeepers are only willing to do for very close friends and family members.

The final option is the 'do-it-yourself' approach. Obviously, when one is dealing with stinging insects, there is always the potential to be stung. Anyone who is thinking of trying to deal with the problem themselves should carefully consider the potential risks involved, be sure they are prepared to accept these risks, and have a clearly defined plan as to how they will proceed. This is not an undertaking to rush into; take time to plan and prepare. Persons who are unfamiliar with honey bees should familiarize themselves with bee handling techniques by referencing books on beekeeping and/or by visiting with a beekeeper. Individuals who are allergic or sensitive to stings should never undertake such tasks.

The first step in attempting to treat or remove a honey bee problem is to assemble the necessary protective equipment. At a minimum this means having an appropriate, properly fitting bee veil and hat, long-sleeved, light-colored coveralls, and protective gloves. High-topped boots with pants legs tucked inside are a good idea too, or one should seal the openings to pants legs in some other fashion. Such protective equipment can be easily and quickly ordered from beekeeping supply companies.

One important note that can make the job safer and easier is that honey bees do not fly in the dark. Therefore, if a nest is easily and safely accessible after dark, this is a good time to treat. Recognize however that, when they are disturbed at night, honey bees will fly toward any nearby light source and will sting. Thus if a light is used, it is best to set the light up so that it shines on the target area from one position while the person applying the treatment approaches from a different position. Also, disturbed bees will crawl about in the dark and will crawl onto people and sting if given the opportunity. Occasionally, hanging clusters of bees are dislodged, by jarring or some other disturbance, and fall to the ground. This results in large numbers of agitated bees, which will readily crawl onto, or up the insides of the pants legs of, anyone who happens to be in the area. For these reasons, it is advisable to wear full protective gear even when working after dark. Despite the advantages of working after dark, most people who are experienced with bees and have proper protective equipment prefer to work during the middle of the day when visibility is better and many bees are busy foraging.

The next step is to seriously assess the risks from other physical hazards, such as falling and electrocution. Dealing with home infestations of honey bees often requires the use of a ladder, and working from a ladder is risky, even under ideal conditions. It becomes even more so when one is wearing a bee veil and gloves and has angry bees buzzing about. If you will be working off the ground, take the risk of falling seriously and take appropriate precautions. Likewise, take the risks of electrical hazards seriously, especially when climbing or using an aluminum ladder or pole around electric lines or when using liquid sprays around sources of electricity.

Depending on the particular situation, there are three different approaches to destroying a colony of bees.

1} Soapy Water: One of the quickest and easiest ways to kill bees that are exposed, such as a swarm hanging on a tree limb or a colony that is in an open, exposed location, is to spray them with a solution of soapy water containing 1 to 2 fluid ounces of liquid dishwashing detergent per gallon of water. This is best done using a 2 to 3 gallon hand pump sprayer. Honey bees quickly lose their ability to fly when soaked with this solution and die within a few minutes. Keep in mind, however, that only bees that are thoroughly soaked will be affected. When treating bees that are clustered together, only the outer layer of bees will be affected initially, and it will be necessary to continue treating as the outer layer of bees falls away and new layers of untreated bees are exposed. Be especially cautious when using any type of liquid spray around sources of electricity.

This soapy water method works much better than aerosol insecticides for treating exposed clusters of bees. Spraying an exposed cluster of bees with an aerosol insecticide will usually cause the cluster to break up, resulting in a cloud of angry bees, but the soapy water does not seem to alarm the bees. Most just remain on the cluster until they are overcome by the effect of the soapy water and fall to the ground, exposing the next layer.

2} Insecticide Dust: In situations where bees are nesting in some type of void where they are protected from direct spraying, an appropriately labeled insecticide dust is generally more useful. Dusts tend to work much better than liquid sprays in this situation because they billow through the nest cavity and because the dust particles are easily picked up on the hairy bodies of the bees, which then tend to ingest the dust particles when grooming themselves. Foraging bees that are away from the colony when the treatment is applied will usually be controlled when they return to the hive and crawl through the dust. Deltamethrin dust is currently the best treatment option for homeowners to use for

this application. This is a pyrethroid insecticide that is commonly used, as Delta Dust, by professional pest control companies to treat wall voids for other insect pests.

Homeowners can purchase small quantities of 0.05% deltamethrin dust under the brand names of Terro Ant Dust or Enforcer Fire Ant Killer. Both of these products are labeled for control of bees and for application into cracks, crevices and other voids in and around homes. Both are formulated as 'waterproof' dusts, which offer advantages over dusts that are not waterproof, and these products are usually available locally. This method of treatment is also useful against other types of stinging insects that nest in wall voids. Note that few other insecticide dusts are labeled and appropriate for this type of use. Do not use dusts that are not specifically labeled for use in the home as crack and crevice or void treatments.

One method of applying dusts is to use a small hand pump type garden duster. Often it is helpful to attach a short piece of appropriately sized, flexible hose to the outlet of the duster. This hose can then be inserted into the entrance to the colony, or through holes drilled into the void, to apply the dust directly into the nest void. Bulb dusters and battery powered hand dusters are also available from online and mail order sources. When working around bees, it is best to keep vibration and jarring, such as drilling, sawing, or hammering, to a minimum as these activities tend to excite and irritate bees and other stinging insects.

Some companies sell specially designed extension poles that can be used in combination with a bulb duster to inject dust into the entrance of a colony located high above the ground while safely standing on the ground. Such tools are somewhat costly, but they make treating such bee colonies much easier and safer. Be extremely careful when using such extension poles around electric power lines and other sources of electricity.

The key to using dusts is to recognize that they need a little time to work. The best approach is simply to apply the dust with as little disturbance as possible and then wait a few days for it to work. Check the colony activity in 2 or 3 days to see if a follow-up treatment is necessary. It usually takes a few repeat treatments to eliminate a large colony. After all of the bees in the colony are killed, the comb and dead bees can then be removed as previously discussed.

In some situations it may be helpful to construct a 4 to 6 inch wide ledge, made of wood or cardboard, and attach it with screws or tape, just under the opening to the hive. The objective is to provide a narrow landing ledge for the returning workers. This ledge can then be treated with insecticide dust, which will then be tracked into the hive cavity by the returning bees.

3} Insecticide Aerosols: Aerosol sprays containing 2% permethrin are very effective for quickly disposing of bees nesting inside walls or other structural voids. Bengal Roach Spray is one product that currently contains 2% permethrin and is labeled for control of bees and for use in the home as a crack and crevice type treatment. Aerosol sprays that come with a small straw-like extension that can be attached to the spray nozzle are best because the extension can be inserted into the void, allowing the insecticide to be injected directly into the void. These aerosol sprays produce a fine mist that circulates in the void. Wing-fanning by the bees also helps distribute the aerosol. Some companies sell extension poles with special attachments that can be used to apply aerosol sprays into second story colonies while standing at ground level (the Gotcha Sprayer is one example). But it takes a good bit of patience and dexterity to accomplish this.

In most cases, the spray can be injected into the hive entrance. In some situations it may be necessary to drill small holes, too small for bees to crawl through, into the infested void. A screwdriver, ice pick, or nail can be used to punch access holes through sheetrock walls. The insecticide can then be applied into the nest using the straw extension. Sometimes it is possible or necessary to locate and treat the nest from the inside of the building. Nests in walls can be located by tapping on the wall and listening with the ear against the wall for the buzzing of the bees. Also, with plaster or sheetrock walls, there may be a stained area that indicates the location of the nest within the wall void.

Be sure to use an aerosol spray that is labeled for crack and crevice use in homes, and, preferably, one that specifically lists bees on the label as one of the pests controlled. Many aerosol products contain less than 2% permethrin or contain other pyrethroid insecticides. These are generally not as effective as the 2% permethrin sprays and will likely require numerous applications. One application of the 2% permethrin is usually all that is required, if the mist thoroughly penetrates the nest area and contacts all the bees. Once all of the bees have been killed, the dead bees and comb need to be removed and the opening sealed as previously discussed.

Honey bees are sensitive to most insecticides and there are many other insecticide sprays that can be used to kill bees. Even aerosol wasp and hornet sprays can be used effectively in some situations, though several cans will usually be required. The three methods discussed above generally work well when properly implemented. When purchasing insecticides to use for control of bees in homes, read carefully to be sure the product is labeled for the intended use, and follow label directions carefully.

Prevention: Obviously, there is no easy way to rid a home of an unwanted colony of bees. Doing so involves a lot of expense and/or work, as well as a significant degree of risk. The best approach to dealing with this problem is to avoid it entirely – by plugging and sealing holes before scout bees locate them and a colony of bees moves in. If bees have already become established in a wall or other building void, do not attempt to deal with the problem by simply sealing them in. The bees will respond by chewing another exit, which can end up being to the interior of the building, resulting in large numbers of irritated bees on the inside.

By the very nature of their construction, most homes contain many voids that honey bees would consider to be ideal nesting sites, if only they could gain access. Honey bees can fit through holes or cracks that are 1/4 inches across or larger. By taking the time to inspect the exterior of your home occasionally, and plug or repair any 1/4 inch or larger openings, you can greatly reduce the potential of having bees in your house.

Africanized Honey Bees: Africanized honey bees (AHBs) are not yet known to be established in Mississippi, but they are established in eastern Louisiana and southern Arkansas and AHBs may begin appearing in Mississippi at any time. Although colonies of AHBs can potentially occur anywhere in the state, the first appearance of AHBs associated with this invasive front will most likely occur in counties on the western edge of the state.

Although the sting of an AHB is no more painful or threatening than that of a European honey bee, AHBs tend to be much more irritable and aggressive than European honey bees, and the potential for sustaining large numbers of stings is much greater with AHBs. AHBs look exactly like European honey bees, and even experienced beekeepers cannot visually distinguish between these two subspecies of honey bees. Also, some colonies of European honey bees can be exceptionally irritable and aggressive, which means that behavior is not always an effective indicator of the type of bee.

Persons who encounter unusually aggressive colonies of bees that they suspect may be AHBs are encouraged to contact the Bureau of Plant Industry in the Mississippi Department of Agriculture and Commerce.

The methods of control discussed in this article will work against AHBs, but the aggressive nature of AHBs makes it much more important to have appropriate protective equipment, as well as bee-handling experience and knowledge, and to take all appropriate precautions. If you suspect you may be dealing with a colony of AHBs, or an especially aggressive colony of European honey bees, you should strongly consider seeking the assistance of a professional pest control company that has experience in controlling stinging insects.

Blake Layton, Ph.D., Extension Entomology Specialist

Thanks to Dr. Clarence Collison, Harry Fulton, and Doug Stone for suggestions and review.

This information is for educational and preliminary planning purposes only. Brand names mentioned in this publication are used as examples only. No endorsement of these products is intended. Other appropriately labeled products containing similar active ingredients should provide similar levels of control. Always read and follow the insecticide label.