



Honey Bees in and around Homes

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Despite their value as pollinators and producers of honey and wax, honey bees are generally unwelcome in and around homes because of the possibility they may sting people and animals. With the movement of Africanized honey bees, or so-called "killer bees," into an area, it becomes even more important to reduce this hazard by removing swarms and colonies of bees near homes.

in south Texas that is often mistaken for the honey bee is the Mexican honey wasp or Mexican bee, *Brachygastra mellifica*. This species stores honey as honey bees do; however, it is smaller than a honey bee and its nest is made of paper-like material. The honey wasp is a very docile species and there is no need to remove its nest unless it is in a very sensitive area.

Bees and Wasps

Because bees and wasps look somewhat alike, honey bees are often blamed for the misdeeds of some of the social wasps such as hornets and yellow jackets. One of the easiest ways to distinguish a honey bee colony from a wasp nest is by the type of material used in making the nest. Colonies of honey bees form wax comb, where they rear their young and store food. The social wasps form nests of a paper-like material. One species of wasp



Honey bee nest with wax comb



Honey bee

Wasps are a problem around homes more often than honey bees because they are more apt to nest in open areas such as under the eaves of a house, or under porches, steps or benches. Also, individual wasps can sting repeatedly, while each honey bee stings only once and leaves its stinger in the skin. For more information on wasps and yellow jackets, consult Extension publication L-1828.

Africanized and European honey bees are the same species and cannot be distinguished in the field. Africanized bees can only be identified in the laboratory. In an area where Africanized bees are known to exist, any unknown colony of honey bees should be considered Africanized and all necessary precautions should be taken to protect people and animals.

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Wasp nest

Foraging Bees, Swarms and Colonies

You may encounter honey bees as they forage for food in a swarm or in an established colony. Each situation may require a different response. The one fact you should keep in mind is that honeybees are not aggressive; they do not search for something to attack. Honey bees are defensive and will attack anything they feel threatens the colony or the individual.

Foraging bees: You may encounter a single bee, a small group of bees or even hundreds of bees foraging for food or water. These bees are away from the colony and are not likely to sting because they have nothing to defend. In general, if you leave them alone they will leave you alone. To prevent foraging bees from gathering in or around your home, remove or prevent access to any sources of food or water that may attract them. This will include any items that provide a source of sugar or water such as flowers, ripening fruit, soda cans and water dishes. People wearing brightly colored clothing and perfume or aftershave lotion may also attract foraging bees because the bees' search for flowers is triggered by bright colors and sweet smells.

Swarms: Honey bees swarm as part of the colony's reproductive process. A honey bee queen is not able to survive on her own or start a new colony alone. When an existing colony prepares to swarm, the bees produce a new queen. Then the old queen and about half of the worker bees will leave the parent colony to establish a new colony. It is this group of bees we call a swarm. Although a swarm appears quite dangerous, honey bees

are usually extremely gentle when swarming. A swarm does not contain stored food or young bees, so the bees have nothing to defend and are unlikely to sting.

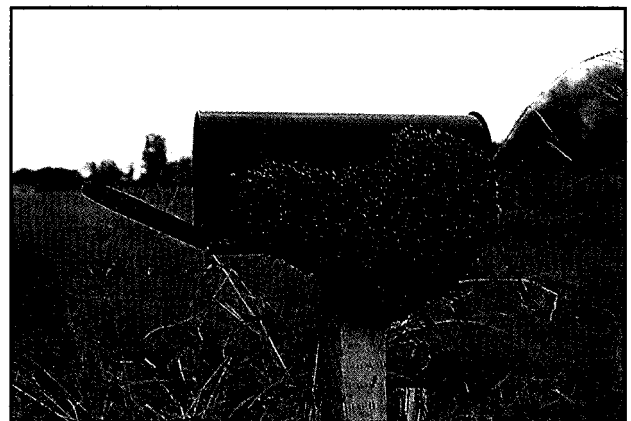
Colonies: Honey bees are most likely to sting when an established colony is disturbed. When a swarm selects a nesting site, the bees begin building comb in which to store food and rear young. Within 2 to 4 weeks, this colony of bees will have developed the defensive nature that the swarm lacks. If an established colony of bees is disturbed, the bees will respond by attacking anything within their territory. This is true for both Africanized and European bees. However, Africanized bees respond more rapidly and intensely than European bees and usually sting in larger numbers. Africanized bee and European bee venoms are chemically identical, but the Africanized bee is a greater threat because of the increased chance of multiple stings.

If you are attacked by bees and do not have on protective clothing, the only solutions are to seek protective cover such as a car, house or thick brush, or get out of the area the bees are defending. Do not attempt to trick the bees by playing dead or hiding, as they will continue to attack as long as you are within their territory.

If you are stung by bees, the stingers should be removed as soon as possible. Stingers should be scraped out with a finger nail, knife or some other sharp object. Do not pinch or pull out the stingers. Pinching the stinger will press the attached venom sack and inject any remaining venom into the victim's skin.

Protective Clothing

If you are going to work with honey bees it is important to wear protective clothing, especially a veil. Bees normally attack first around the face and eyes. Make certain the veil does not have holes and does not touch the skin. Other items include a hat loose fitting coveralls (if they are tight-fitting bees can sting through them), leather gloves and boots. When fully dressed you should not have any exposed skin, and any potential entry paths such as pants legs, pants pockets and shirt



Swarm of honey bees

sleeves should be closed with tape, zippers or velcro. A bee smoker can be used to reduce defensive behavior.

Control of Honey Bee Swarms

A swarm of honey bees may cluster temporarily on almost any object such as a tree branch, mail box or fence. The swarm may remain for a few hours or, at times, for several days while scout bees search for a suitable nesting site. Although a swarm is not dangerous and will generally move within a few days, this is the best time to eliminate bees if they are in an area where they are not wanted. Swarms near homes often move into wall voids, attics or chimneys if not eliminated.

Beekeepers will sometimes collect swarms; however, the low value of the bees and other problems with collecting swarms have forced many beekeepers to charge for this service. In areas where Africanized bees are established most beekeepers won't collect swarms.

In such areas there maybe local response personnel who will eliminate swarms at little or no cost. Another alternative is to have the bees killed by a commercial pest control operator, even though you will be charged for this service. If you choose to kill the bees yourself, you need to wear protective clothing.

Honey bees are susceptible to a wide variety of insecticides, and can be killed with any of the commercial products labelled for this use. However, when a swarm of bees is in an exposed location, soapy water can control them very effectively with less likelihood of disturbing the bees and triggering the defensive response. A mixture of 1 cup of liquid soap or detergent in a gallon of water will kill bees if they are completely soaked with the solution. The soap spreads the water over the bees and causes them to drown. Apply the soapy water with a hand pump sprayer or, if the swarm is too high, with a hose-end applicator designed for spraying trees and shrubbery. If the bees are in a protected area and can not be thoroughly covered, soapy water should not be used. If a swarm is sprayed during the day, it maybe necessary to spray again at night to kill bees that were away from the swarm during the earlier treatment.

Finally, a swarm indicates that a colony maybe nearby. Usually a swarm will gather near the colony it left shortly after it emerges. The area should be carefully searched while wearing protective clothing to locate the colony so that it, too, can be eliminated.

Honey Bees in Buildings

Honey bees prefer to nest in a protected location or cavity. To keep bees from entering walls and other structures, block all entry ways such as holes in walls where pipes or electric wires enter, cracks in window framing, knot holes in wood siding, weep holes in bricks, and cracks where wood and brick structures join. Most of these openings can be filled with caulking. If an



Protective clothing and comb Inside a wall

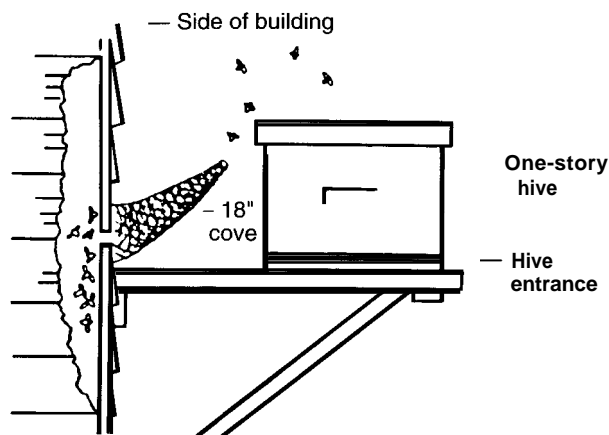
opening is necessary for air flow, block it with wire screen. If you find that bees are already in a wall, do not block their entrance. Bees trapped in a wall will search for an alternate exit and may find their way to the inside of the building.

Honey bees that have moved into a building should be removed as soon as possible, before they begin to build comb in which to rear young bees and stem honey. Only when the bees first enter can they be killed without having to open the wall and remove large quantities of dead bees, wax and honey. If the colony has been in place for 3 weeks or longer, brood and food stores will be present in the colony and the bees are more likely to be defensive. An established colony must be removed after it is killed to prevent odor problems from decaying bees; to prevent other insect pests from being attracted to the dead bees, honey and wax; and to prevent honey from staining the wall as combs melt or are destroyed by other insects or mice.

Control of Colonies

Established colonies of honeybees, especially Africanized honey bees, can react very vigorously to any disturbance and will attack any person or animal in their territory once they are disturbed. Any time you are working with an established colony you should wear protective clothing and ensure that no unprotected people or animals are nearby. Africanized bees will defend a fairly large area, so it is best to keep unprotected people or animals at least 400 yards away.

Before you start any control measures, you should know the location of the colony in the wall in relation to the flight entrance. The nest may be far enough away from the entrance that insecticides applied at the entrance will not reach the bees. The number of entrances should also be determined. The nest can be



Trapping bees out of a wall

located by tapping on the wall at night and listening for the area where the buzzing sounds are loudest. Bees keep the nest center at about 92 degrees F, a temperature high enough to warm the wall beside it so that you may be able to feel, as well as hear, the nest location.

Honey bees can be trapped and removed from structures. This control method often is effective in removing both bees and honey, but requires much more time and the help of a beekeeper. (This is not an approach you would want to use with Africanized bees.) However, when opening a wall would be too expensive, this method may be the best alternative. First make sure to block all but one entrance to the wall. Then, place a screen wire cone over the entrance hole, with the large end next to the wall. The opening in the small end should be just large enough to allow one bee at a time to exit. Place a decoy hive with a queen and a few worker bees nearby to attract bees emerging from the wall. Trap as much of the colony as possible (this usually takes 3 to 6 weeks), then spray the nest, through the entrance hole, with an insecticide containing pyrethrin, resmethrin or sumithrin to kill any remaining bees and the queen. Do not use products with longer residual effects. After 2 or 3 days, remove the trap to allow bees in the decoy hive to retrieve the honey stores in the wall. About 2 weeks later, remove the decoy hive and stop up the entrance hole in the structure. The wax comb in the wall will likely be destroyed by wax moths, leaving only webbing and some fecal material.

Insecticides are the safest, quickest and most effective materials for killing bees in buildings. Do not use fumigants or flammable compounds in structures. Carbaryl (Sevin®), pyrethrins, propoxur (Baygon®),

malathion, resmethrin or sumithrin are insecticides suggested for this use. The pyrethroid insecticides are often used for their rapid knockdown of bees.

Either dust or spray formulations can be used within a wall or other cavity, but dusts generally disperse better. Apply the insecticide at night through the entrance hole if the colony is fairly close to the entrance or if the nest can not be located. Or, drill a hole in the wall above the colony and apply the dust or spray through this opening (the hole should be small enough that bees cannot exit, and can be drilled from the inside wall to avoid bees around the hive entrance). An extremely large colony may have to be treated again about 10 days later to kill emerging young bees. As with swarms, if colonies are treated during the day bees that return from the field in the evening will gather near the entrance and will need to be sprayed.

After all sound and flight activity have ceased, or at least within 2 weeks, open the wall and remove all dead bees, combs and honey. These must be burned or buried because they are attractive to other bees and are toxic to both bees and people. Do not eat the honey or wax since they are contaminated with pesticide. Do not leave the honey and wax where other bees can reach it or you may damage valuable honey bee colonies nearby. The location within the wall will be attractive to other swarms unless it is sealed tightly to keep them out. An additional application of insecticide will also help to prevent the entry of another swarm.

As with swarms, a good alternative is to have the bees killed by a pest control operator. However, you still need to be certain the dead bees, wax and honey are removed. It may be necessary to hire both a pest control operator to kill the bees and a contractor to open the wall, clean out the bees, honey, wax and other material and repair the wall.

Managed Colonies

It is illegal for anyone other than an apiary inspector to kill any managed colony of honey bees without the owner's permission. If you need to have a managed colony moved, contact the owner. All apiaries must be marked in some way that identifies the owner. Contact the local or state beekeeping association or the state apiary inspection service for assistance in identifying the owner of any problem colonies.

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