Identification of Bees and Wasps

BEES Bees are robust bodied, hairy insects with four wings. They are usually dark in color with minimal contrasting color patterns. Their hind legs are flattened into a surface which is used to carry pollen. Bees feed on nectar and pollen from flowers. Honey Bees are about one inch long and are brown with black encircling their abdomen, giving it a subtle striped appearance. Africanized honey bees are slightly smaller than our garden honey bee, but only an expert can tell them apart. Due to the fact that Africanized honey bees are expected to have arrived in Arizona in 1993 or 1994, it is important to be able to distinguish between some of our common flying insects.

Bumble Bee

Carpenter Bee

Honey Bee

Africanized Bee

WASPS Wasps are slender with a relatively thin waist. Their brightly colored “skin” is generally smooth and somewhat shiny, often with sharply contrasting black and yellow patterns. Their hind legs are narrow and cylindrical. All wasps have four wings and the females can sting multiple times. Wasps are predators and feed on insects and spiders.

Mud Dauber

Paper Wasp

Yellow Jacket

How do honey bees establish new colonies?

Honey bees are social creatures that live in groups of up to 60,000 individuals. Each spring and to a lesser extent during the fall, about half of the work force of a honey bee colony separates from the rest and flies out to form a new colony at a different site. While they are in transition, the bees are called a "swarm". The swarming bees may rest in a large group out in the open, such as a tree branch and then move on to another site. Once they have found a suitable place to settle down, the bees will begin to build a many-celled wax structure called a comb. An established colony with comb is much more defensive.

The best way to prevent bees from establishing a colony on your property is not to provide them with an ideal environment for survival. Honey bees require three things in order to survive; food, water and shelter. Honey bees use nectar and pollen from flowers as food. Honey bees visit swimming pools, hot tubs and pet and livestock watering dishes to consume water not only for themselves, but also to take back to cool the hive.

They nest in a wide variety of locations, such as animal burrows, overturned flower pots, cavities in saguaros, trees or rocks, irrigation valve boxes, drainage tiles, discarded automobile parts or appliances and in walls of homes. They may enter openings as small as 3/16" in diameter, or about the size of a pencil eraser, as long as there is a suitable sized cavity behind the opening for a nest.

Africanized honey bees are also known to move their entire colony to a more suitable site, a process called "absconding."

How do I keep them out of my home and yard?

ELIMATE SHELTER

To prevent bees from settling in our house or yard, you will need to be vigilant for potential nesting sites.

- Fill or cover all holes 1/8 inch in diameter or larger in trees, cacti or block walls.
- Caulk cracks in walls, in foundation and in the roof.
- Check where the chimney meets the house for separation and make sure chimneys are covered properly.
- Put mesh screens (window screen mesh) over rain spouts, drains, attic vents and irrigation valve boxes.

- Remove any trash or debris that might serve as a shelter for bees, such as over-turned clay pots, automobile parts, tires, appliances, cardboard boxes or stacks of crates.
- Fill or cover animal burrows in the ground.
- Make sure window and sun screens are tight fitting.
- Keep shed doors tightly closed and in good repair and exercise caution when entering buildings that are not used frequently.

Monitor Water Sources

- It will be difficult to prevent access to water sources near man-made lakes but in your yard you may:
- Discourage bees from visiting evaporative coolers by placing a few ounces of pine scented cleaner in the water.
- Add two (2) tablespoons of vinegar per gallon of water to discourage bees from pet water or bird baths.
- Cover or drain pools or tubs when not in use.
- Repair leaky faucets and faulty irrigation systems.

Removing flowers as a source of food is generally not effective nor recommended and individual bees gathering pollen and nectar from flowers should be left alone. Bees are very important because they pollinate many plants, including crops such as cucumbers, squash and citrus. In fact, approximately 1/3 of our daily diet is attributed to insect pollinators.

A single bee or just a few bees in your yard does not necessarily mean you have a colony in your yard, because bees will fly some distance in search of food and water. Look for numbers of bees passing into and out of or hovering in front of an opening and listen for the hum of active insects. Or if you see bees entering and leaving a hole near or in your house, you may have a swarm or colony of bees. Look low for colonies in or at ground line and also high for colonies under eaves or in attics.

If you do find an established bee colony in your neighborhood, don't panic. On the other hand, don't ignore them either. Small colonies that have recently swarmed may be docile at first, but tend to become more defensive with age, so you should have colonies around the home removed as soon as possible.

Africanized Honey Bees

These bees are close relatives of our common garden bees or European honey bees, but they behave differently. First of all, the temperamental Africanized honey bees defend their nest in greater numbers and with less provocation than European honey bees, a characteristic which has given them the nickname, “killer bees”. Africanized honeybees are also not as choosy about where they nest; they will even nest in over-turned flower pots and animal burrows in the ground. This means Africanized honeybees are more likely to be found in and around the home, where they require removal.

What is the Difference between a swarm and an established colony of bees?

Regardless of myths to the contrary, Africanized honey bees do not fly out in angry swarms to randomly attack unlucky victims. Each spring and to a lesser extent during the fall, about half of the work force of a honey bee colony separates from the rest and flies out to form a new colony at a different site. While they are in transition, the bees are called a “swarm”. A group of bees that are in the process of leaving their parent colony and starting a nest in a new location are called a swarm. Usually a new queen is reared to stay with the parent colony, and the old queen flies off with the swarm. Scout bees have often located potential nest sites prior to swarming, but the swarm may spend a day or two clustered on branches or in other temporary locations, until the bees settle on a new nesting site. If they can’t find a suitable location, the bees may fly several miles and cluster again. During the time that bees are swarming they tend to be more docile because they have no nest to defend. But only a few days after they have settled and begun to build a comb, they become defensive again. Thus it is best to avoid honeybees regardless of their status.

Once a group of bees has begun to build comb and produce immatures or brood, then we call it a colony again.

If you spot a swarm, it may move on within a few hours. If the bees stay longer, it is best to have them removed as quickly as possible before they start a colony. Swarms may be coaxed into a hive box by an experienced beekeeper.

Can I remove the Bees myself?

If you discover a swarm or colony of bees:

- Do not disturb the bees or try to remove them yourself.
- Do not throw objects at the swarm or colony or shoot it.
- Do not try to burn it or pour gasoline or kerosene on it.
- If the bees are in your chimney, don't try to burn them out. The honey and wax will burn almost like oil and may start a serious fire.

These actions will just arouse the bees to defend the colony and it is likely someone will get stung. If a bee colony has taken up residence in the walls or attic of your house, do not plug up the entrance hole. The live bees inside the hive will immediately search for a new place to exit and chances are good that they will find a way inside your house, causing even more problems.

When bees have started a colony in a wall, it is likely the wall will have to be opened up and all the honey and beeswax will have to be removed. If the honey and beeswax are left behind, it may attract another swarm of honey bees or undesirable pests such as mice, rats, ants, cockroaches, etc. If these pests don't clean up the honey and wax, there may be an odor of fermenting honey and decaying bees in the house for several months. In the Arizona climate, the honey and wax are likely to melt and stain walls. (The honeybees keep their hive cool enough to prevent this while they are alive). For all these reasons, it is best to leave bee removal to trained personnel.

Do all bees need to be killed?

No, it is not always necessary to kill bees. European honey bees are beneficial insects because they pollinate crops and many other plants. Unless they are in a location where they are a danger to people, pets, or farm animals, honey bees should be left alone.

The Arizona Africanized Honey Bee Advisory Committee was assembled by and functions under the auspices of the Arizona Department of Agriculture, 1688 W. Adams, Phoenix, AZ 85007 1-602-542-4373

How Emergency Response Personnel respond to Bee Eradication

Once notified, the personnel will evaluate how much of a danger the bees are to others and how difficult they will be to remove or control. A colony that is out in the open, such as on a tree branch is much easier to remove than one within a structure. Often bees in the open can be controlled by emergency response personnel with a spray mixture of water and a surfactant such as soap.

Both C.R.I.T. Fire Department and C.R.I.T. Environmental Protection Office respond to bee calls. You will be asked to sign a "Consent form for the removal of bees", to allow our personnel to take the necessary steps to remove the bees from your home. The removal of bees is complicated and difficult. The following is a list of some of the problems associated with removing bees:

1. Possibility of structural water damage, both to the inside and the outside of your home, including the drywall and the paneling.
2. Possibility of structural damage resulting from the removal of boards, roofing, or paneling.
3. Possibility of damage to trees, plants, and lawns including accidentally knocking down or deliberately cutting down various plants and damage caused by trucks to lawns.
4. Possibility of lingering odors of fermenting honey and decaying bees, if all the bees or beeswax is not removed.
5. Possibility of damage to appliances or outdoor furniture.
6. Possibility of damage to electrical wires.

CRIT Fire will not remove the bees from your home without discussing these risks with you and will try everything in their professional demeanor to protect your home.

CRIT Fire will assist you with the removal of bees from your residence three (3) times only. But you must take these added steps to insure that the bees will not return. Use the ones pertaining to your situation:

1. Paint area with white paint.
2. Replace any and all boards immediately after painting.
3. Cover or fill all holes or cavities in trees or outside walls, in foundation and in the roof.
4. Put screens on windows, water meter boxes and attic vents.
5. Remove any trash or debris that might serve as a shelter for bees.

If after three attempts by CRIT Fire, to remove the bees from your residence AND THESE STEPS ARE NOT TAKEN and the bees return we will call an exterminator who in turn will charge you a fee for services rendered.