What PCOs and Inspectors Need to Know About Honey Bees

European honey bees came from Europe, brought by the Spaniards and English. They are not federally protected. Local laws may vary. A "beehive" is bees in a man-made box. "Wild bees" live in a nest/colony and are really feral bees that escaped from beehives generations ago.

How to recognize honey bees. Honey bees are fuzzy and often have filled pollen sacs on their rear legs. They are striped black and amber, not yellow.

A swarm is a ball of bees with the old queen that have split off from an established colony. It hangs out in the open while scouts look for a new home. A swarm is NOT a cloud of bees flying around. Swarms are gentle and non-aggressive. Leave them alone if possible. When they find an appropriate cavity they will fly away.

Bees in a swarm have enough honey in their stomach to last for three days. If they haven't found a home by then they will build an open air colony right there. This is rare.

A colony or nest consists of a queen, female workers which are sterile, and drones (males). Only the workers can sting. Once a worker stings the barbed stinger and attached poison sac is ripped out of the body and the worker will die. The poison sac will continue to pump toxin and also release an alarm pheromone which will cause attacks by other bees. The best way to remove a stinger is by scraping It off. An average colony is 30,000 to 60,000 bees. Bees go outside the hive to pollinate and collect nectar and pollen the last 2 weeks of their life.

The best cavity for honey bees is already EMPTY and compact with 4-60 gallons of volume, 6 ft or higher with a small southernly entrance. They don't chew to create a cavity. Floor joists, columns, arches, uninsulated walls and soffits make excellent homes. They seldom make a nest between a brick and stud wall.

Bees are attracted to light. When they first move into a house they will explore the cavity the first few days and may get into the living area. Then they will fly to a window or light and exhaust themselves within a few hours. Recessed lights and gaps around ceiling vents and fixtures are the usual openings they investigate.

There is very little downside to waiting to remove bees once they have moved in. It is difficult to locate them at first even with an infrared camera. It will take a few days to build honeycomb and then eggs laid by the queen will not hatch until 21 days later. In the meantime worker bees will be dying off by attrition; they only live for 6 weeks.

They keep the brood (larvae) at 96 degrees year round. An infrared camera or endoscope/bore scope are SOMETIMES helpful. They sound of the colony will be like rushing water in the wall. Drilling holes and probing with a long stiff wire is the best tool.

They will abandon (abscond) a cavity if it gets over 120 degrees. A good cavity in March may become too hot in June.

Bees typically swarm 2-3 times per year when the colony will split and the old queen will leave with a swarm. This means the genetics of the colony will change. Gentle colonies can suddenly become aggressive. Also the house may end up with multiple infestations. Seven is the most I've seen.

Bees collect nectar (carbohydrate) and pollen (protein). They concentrate it 40 to 1 and cap it. Below 19 percent in moisture, honey will not spoil.

Bees coat the inside of the cavity with wax and propolis. This makes the cavity sterile and waterproof. This also makes the cavity a magnet for future swarms for decades. Bees do no damage to the structure of the house other than the wear and tear of their feet.

In many states prior honey bee infestations are a required reveal by a seller's real estate disclosure. Not in Texas.

A swarm trap or bait hive is a small and easy to move weatherproof box with 5-18 gallons of volume and a small opening for the bees. It is scented inside with a queen bee pheromone or lemongrass oil and old beeswax. Placed in a tree near a previous infestation, it is one tool to keep bees from reinfesting a house by giving them an easy alternative home. Another tool is to completely fill and block ALL openings or cracks that lead to any cavity using silicone caulk, rust proof screen, weatherproof rigid foam, etc. It is difficult and not always effective on decaying structures.

After a cutout is done the cavity should be stfuffed COMPLETELY AND TIGHTLY with unfaced fiberglass insulation to occupy the volume. This helps prevent reinfestation.

You cannot seal up a bee's nest. They will chew their way out or travel 20+ ft to find a new entrance and may get into the rooms. They go through Great Stuff and Pest Block foam like butter.

Dead hives will drip fermenting honey and be infested with Small Hive Beetle larvae. It will stink and the larvae will crawl throughout the house looking for dirt to pupate in. See the following video "Do NOT Spray The Bees" on the Katy Busy Bee YouTube channel. https://youtu.be/IV-d_1fuHP4?si=A3wOCoQpwRg7M3z

Bees are difficult to exterminate. They build the colony in a manner that shields them from sprays and penetrations.

EXTERMINATE WHEN:

1. Human well-being is threatened or bees are attacking.

2. The smell, rot, maggots, fermenting dripping honey and subsequent black mold are not going to be an issue or legal liability.

3. The homeowner is willing to have someone remove all the dead material the VERY NEXT day.

4. There is no way to remove the bees either through a cutout or a forced abscond.

FORCED ABSCOND WHEN:

1. You can blow smoke or standard honey harvesting repellents BEHIND the colony to drive the bees out the entrance. If applied at the entrance it will only drive them deeper into the structure.

2. Sructural issues preclude a cutout; including inside a hollow tree.

3. Keep in mind the honey and larvae are left behind.

4. A small percentage of bees will be left behind but will be passive and die off within a few days.

CUTOUT WHEN:

1. The owner doesn't want the bees killed.

2. The bees are in an area where rot and dripping honey would be an issue.

3. The cost of a cutout and repair would be less than the cost of extermination AND removal the dead material plus doing repairs.

4. A small percentage of bees will be left behind but will be passive and die off within a few days.