



VARMET GUARD®

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Common Name: **Honey bee**
Scientific Name: **Apis mellifera**

HONEY BEE



Introduction. Honey bees get their common name from the sweet amber syrup they make from the nectar of flowers and use as food. Honey bees not only provide honey and wax, but as pollinators are of far greater importance. They are also responsible for a large share of insect stings, although many stings blamed on “bees” are actually inflicted by yellow jacket wasps. Honey bees are worldwide in distribution.

Recognition. The adult worker’s body is 1/2 to 5/8 inch long. Honey bees are banded with orange and brown or black and are mostly covered with pale hairs, especially on the thorax. A barbed stinger is present.

Queen honey bees are slightly larger, about 5/8 to 3/4 inch long. The longer, more tapered abdomen extends well beyond the wing tips. The queen has a smooth stinger. Males or drones are robust, about 5/8 inch long, have large eyes and do not possess a stinger.

Africanized honey (“killer”) bees look just like our domestic bees but are extremely aggressive when disturbed. Fortunately they are not in Ohio. A specialist is required to differentiate this African subspecies.

Similar Insects. (1) Yellowjackets (Vespidae) are actually wasps that have the abdomen banded with yellow and black or ivory and black. (2) Other bees (e.g. digger bees, mining bees, and similar solitary bees) nest in slender shafts and galleries excavated in soil. (3) Drone flies and flower flies (Diptera: Syrphidae) resemble honey bees and often hover near blossoms but have only 1 pair of wings and no stinger.

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Biology. Honey bees are social insects and live as colonies in hives, with mature colonies of 20,000 to 80,000 individuals. Adults are represented by workers which are sterile females, a queen or fertile, inseminated female, and drones (males) which come from unfertilized eggs.

The entire population overwinters. There is only one egg-laying queen in the hive and she mates only once. She can lay as many as 1,500 to 2,000 eggs per day, and may live as long as 5 years. The queen produces many controlling hormones (pheromones), mostly from her mandibular glands, which regulate among other things the production of new queens and inhibit the development of worker ovaries. The young workers care for the young or brood, build the comb, provide hive ventilation, and guard the hive entrance. Older workers serve as foragers to gather pollen, nectar, and propolis or bee glue. Workers live only about 5-7 weeks during the summer; but those emerging in the autumn overwinter. Drones (males) appear periodically and are short lived, usually living only a few weeks – just long enough to serve as sperm donors.

Honey bees swarm primarily when the colony size gets too large for the available hive space or the queen begins to wane or fail. New queens are produced and the old queen leaves with a large number of workers.

Habits. Honey bees from European stock are not aggressive, and do not search for something to attack. Instead, they are defensive and will attack only whatever seems to threaten the colony.

Swarms first move to a temporary site such as a tree branch. The swarm will usually remain here for about 24 to 48 hours until permanent quarters are located, and moves on. Permanent quarters may consist of a beehive, hollow tree, hollow wall, attic or some similar place that offers shelter from the weather.

Bees in a swarm are very docile and not likely to sting because they harbor no food stores or young and therefore, have nothing to defend. Likewise, honey bees encountered away from the hive are unlikely to sting unless severely provoked, like stepping on them. However, if the hive entrance is approached, the guard bees can become very aggressive. Worker bees have barbed stingers and when used, the stinger, poison sac, and associated tissue are torn from the body. If the stinger is not removed immediately, involuntary muscle contractions will move the stinger deeper into the skin and continue to pump toxin into the wound. In addition, the stinger gives off a pheromone which attracts other bees and induces an alarm and attack behavior. Therefore immediate removal with a fingernail or knife blade is recommended; squeezing only forces more venom in.

The normal reaction to bee stings is local pain for a few minutes followed by swelling and heat at the sting site. Swelling subsides in a few hours. Often itching may last for an additional day or two. First-aid consists of

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quickly removing the stinger with a fingernail or knife blade. After stinger removal, do not rub the area because this causes the venom to spread, or scratch the area which may cause secondary infection; but clean it with soap and water followed by an antiseptic. A cold compress will reduce pain and swelling. If the reaction is more severe than a small welt, or breathing becomes difficult, a physician or paramedic squad should be contacted immediately because death from anaphylaxis can occur within 15-30 minutes from severe allergic reactions.

Cultural Control & Precautionary Measures. Ignore springtime honey bee swarms resting temporarily on tree braches or call a local beekeeper to come and remove the swarm alive. Call Varmant Guard for beekeeper information and to address honey bee swarms that have already moved into your residence or building.

If bees are entering your living space from a wall, ceiling or soffit, try to locate the entry point(s) and fill or cover them from inside using duct tape or other temporary material.

In a residential situation, it may be desirable to discourage foraging bees from coming around the home. This is especially true if small children or allergic people are present. Discouragement consists of removal of-, or preventing access to any sweets (e.g., beverages and sweet foods) or water which may attract them to doorways, porches, patios, decks and play areas. Nectar-bearing flowering vegetation should be located away from these same sites, as well as other areas frequented by people (like sidewalks and mailboxes). Also lawns should be kept free of white clover and flowering weeds.

Professional Control. Live removal of honey bees is desirable and the preferred method when possible. Therefore Varmant Guard customer care personnel will often refer open swarms of honey bees to a local beekeeper, who will remove the swarm free of charge. Live removal involves 1) relocating the queen and swarm into a cardboard box for transferal to an empty hive or 2) trapping the bees out and capturing them with a decoy hive containing a queen and a few bees, killing the queen and the few remaining bees with pyrethrins. If honey bees must be killed in wall or attic, a Varmant Guard technician will apply an appropriately labeled aerosol and /or dust insecticide into the cavity containing the hive.

At some point following the treatment the dead bees, comb and honey must be removed or else, as the wax hive and dead insects decay, there will be a strong, foul odor as well as seepage into-, and staining of adjacent plaster and gypsum board. Furthermore, this decay-related odor will attract other insects and mice.



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Honey bee hive in attic of old building