Bees and Wasps
Firefighter Health & First Aid

In general bees sting to protect their hive and seldom sting when they are out foraging unless they feel threatened (like being swatted at or stepped on). On the other hand, a large number of bees or wasps foraging in one area may indicate a colony is nearby. If you intend to work or camp in the area, scout the area for bee/wasp habitat first. Colonies vary in behavior over time, especially with changes in season, becoming more aggressive and easily agitated in the late summer and fall. You may pass the same colony for weeks and then one day provoke them unexpectedly.

- **Look out for colonies:**

  Bees and wasps nest in a wide variety of locations, such as pipes, holes, behind shutters, under shingles, cracks and crevices within trees and rocks, and hanging from branches. Be alert for groups of flying bees entering or leaving an opening and listen for buzzing sounds. Be especially alert when climbing, digging fire line and moving logs. DO NOT put your hands where you can’t see them.

  Be particularly careful when using any heavy equipment that produces sound vibrations, such as chainsaws, weed eaters and pumps. **Keep escape routes in mind.**

  !!! **If you disturb a nest and are being attacked, run away. Use your shroud or shirt to protect your head neck and face.** Swatting and waving your arms aggravates bees/wasps more!

- **About Africanized and European honey bees:**

  Honey bees are about 5/8-inch long, brown, hairy insects with black encircling their abdomen, giving them a subtle striped appearance. All honey bees look alike. Only an expert can tell them apart. The sting from a single Africanized honey bee is no more harmful than one from the common garden or European honey bee. Africanized honey bees are known as "killer bees" because they defend their nests more aggressively, with less provocation, and in larger numbers than the other honey bees, so there is a greater chance of receiving many stings.

  Africanized honey bees are found in the southwest and are spreading across the south. You are more likely to be struck by lightning than being killed by Africanized bees.

- **Considerations with all bees and wasps:**

  1) If a bee gets in the vehicle while you are driving. Stay calm, pull over and stop, let the bee out.
  2) Keep trash away from your camp and keep it covered.
  3) Look at what you are drinking and eating before you eat or drink. Bees and wasps are attracted to accessible food and water.

- **If you get Stung:**
The first thing you should do is remove the stinger. The end of a sting is barbed and will remain stuck in the skin even if the bee is removed. Muscles in the stinger allow it to continue pumping venom into the victim, even if it is no longer connected to the bee. Do not pull the stinger out with your fingers or tweezers because this will squeeze out more venom. Instead, scrape the stinger out with your fingernail, the edge of a credit card, a dull knife blade, or other straight edged object.

Two kinds of reactions are usually associated with bee stings and those of other stinging insects as well: (1) local or (2) systemic, allergic, or life-threatening.

(1) Local Reactions:
A local reaction is usually characterized by pain, swelling, redness, itching, and a wheal surrounding the wound made by the stinger. Swelling can sometimes be locally severe. For instance, if stung on the finger, the arm may be swollen even up to the elbow. Swelling such as this is fairly common, even though it may be alarming. Swelling may be reduced by cooling the wound and/or taking an antihistamine such as Benadryl. Topical solutions such as calamine may also help alleviate pain.

(2) Systemic, Allergic, or Life-Threatening Reactions:
Allergic reactions can develop anywhere on the body and may include rash or hives, dizziness or headache, cramps, nausea, vomiting, swelling not in the general area of the sting, shortness of breath or difficulty swallowing, shock and unconsciousness. If you experience any of these symptoms, seek emergency medical assistance immediately. Symptoms can begin immediately following the sting or up to 30 minutes later and might last for hours.

If you know you are allergic:
Anaphylaxis, if treated in time, usually can be reversed by epinephrine (adrenaline) injected into the body. Individuals who are aware that they are allergic to stings should carry epinephrine in either a normal syringe (sting kit) or an auto-injector (Epi-Pen) at all times when working outside and communicate their allergy to supervisor/coworkers in case they become incapacitated. Epinephrine is obtainable only by prescription from a physician.

Discussion Topics:

- Have you and your crew identified who is allergic to bee/wasp stings? Are they carrying their prescription Epi? Identify the Epi and its location to the rest of the crew.

- If you have an EMT on your crew/team, what are their protocols for treating stings and related allergic reactions?

- Discuss how you and your crew will safely flag or mark any identified nests/hives.

References:
USDA-ARS Carl Hayden Bee Research Center