HOW TO SUBDUE ATTACKING AFRICANIZED HONEY BEES

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A Guide for Fire Fighters and Rescue Personnel

Africanized honey bees (AHB) are spreading in Texas. Their attacks can be a life-threatening emergency. Fortunately, rescue personnel can help people under attack by using-with slight modification-equipment and materials common on fire trucks, ambulances and hazardous materials response vehicles.

This guide can also be used to protect people from swarms of wasps and domestic honey bees, which to the naked eye are indistinguishable from the AHB.

Protective Clothing

Conventional heavy turnout gear worn by most fire fighters protects all areas of the body except the head and neck. Consequently, veils are essential, but they must be adapted to the headgear worn. Bee veils are available from beekeeping supply houses. Mosquito veils can be obtained from military surplus and sporting goods stores. Seal the veil at top and bottom with string or duct tape. Tape should also be used around the waist, wrists and ankles and to close any other gaps. Leather areas of turnout gear, such as gloves, may antagonize the bees. Plastic or rubber gloves are best.

Disposable hazardous materials suits, such as those made of Chemrel R, Saranex R or Tyvek R, provide good protection, especially if worn over street clothing or uniforms.

Reflective aluminum suits work but may limit movement, and veils and duct tape are needed.

Wetting Agents

Bees are easily immobilized and killed by wetting agents (surfactants) - including commercial liquid dishwashing detergent. Nonfoaming fire control chemicals and fire fighting foams with surfactant characteristics such as the aqueous film-foams (AFFF) also work.

Not all commercially available products have been tested, but most such wetting agents should be equally effective. Chemicals tested so far include: original Palmolive dishwashing liquid, 9-55 R fire control chemical, Silv-ex R foam concentrate and FC-600 Light Water brand ATC/AFFF. All had a light but distinctive odor. A one percent

solution was sufficient to immediately immobilize honey bees and apparently kill them within 60 seconds.

If there is doubt whether a particular chemical will work, rescue personnel should enlist the aid of a local beekeeper. Clearly, human and animal safety must be the most important consideration. The U.S. Environmental Protection Agency has conditionally approved detergents for use against AHBs.

Victim Rescue

After arriving at a site, rescue personnel first should assess the situation from within their vehicles. Then they should retreat several hundred yards, put on protective clothing and move any onlookers to a safe distance.

Each situation is unique, but to rescue a victim, two things must be done as quickly as possible: establish an adequate insect barrier, and neutralize the insects' alarm odor - which consists of chemical components of venom that enable more bees to find and attack the victim.

Fire and rescue units responding with standard fire fighting equipment can quickly accomplish both objectives by using water plus a non-toxic wetting agent.

Using standard fire fighting procedures, set up a line with an educator capable of delivering a one to three percent spray of one of the foaming/wetting agents and a nozzle capable of delivering a wide fan patter. A light initial application to the victim will stop the attack by most of the insects on or near the victim within 60 seconds. These insects, unable to fly, will begin to suffocate and can be quickly brushed aside.

If an obvious line of insect flight can be determined, a vertical wall of spray 20 to 30 feet in the air should intercept further flight activity. Or, the nozzle can be inverted near the victim to provide a curtain of safety.

Rescuers wearing proper protective gear then can carry a victim into a house, van or ambulance for treatment and transport. Many bees, however, will follow to continue their attack.

In a house, vacuum up bees attracted to windows by light. In a rescue vehicle, drive away and then roll down the windows and chase the insects out.

Sting Removal

Once the victim is protected, remove stings as quickly as possible. Otherwise, the white, translucent, venom sac - with its nerves and muscles attached - will continue to pump venom into the wound for a minute or more. Removing the victim's outer layer of garments may help because stings embedded through the fabric will be dislodged in the process.

The best way to remove stings is to simply scrape them away with a fingernail, credit card or similar instrument. Never pinch, tweeze or otherwise attempt to pull stings out, as this will simply inject the remaining contents of the venom sacs.

After sting victims have been cared for, rescuers should launder the bees' alarm-odor chemical from suits, veils and equipment.

Training

Fire and rescue personnel should familiarize themselves with normal activities of stinging social insects in their area. Local bee experts or beekeepers can provide extremely valuable advice and assistance, particularly when unusual situations arise. All states have active beekeeper organizations, as do many local communities, and they usually welcome requests for assistance.

Most beekeeper groups would welcome an invitation to help develop training exercises, where bees would be used to simulate an actual attack and allow rescuers an a opportunity to practice their skills.
