

Africanized Honey Bees: A Concern, Not a Hollywood Villain

For decades, Hollywood and the tabloids have worked hard on the myth of marauding killer bees. But even though Africanized honey bees (AHBs), as they are more properly called, are not the terrible threat that they've been portrayed as being, they do pose a real concern for agriculture, beekeepers, and sometimes the public.

AHBs, which first spread to the United States in 1990 through the southern tip of Texas, have today reached eight more states: Arizona, Arkansas, California, Florida, Louisiana, Nevada, New Mexico, and Oklahoma.

There is no way to kill off AHBs that would not also be deadly to the European-descended honey bees on which the United States depends to pollinate about 130 fruit, vegetable, nut, ornamental, and fiber crops, adding billions of dollars a year in value. The demand for honey bees for pollination continues to grow each year. Last year, California alone required the services of more than a million honey bee colonies just to pollinate that state's almond crop—valued at \$2.34 billion in 2005.

This essential need for honey bees to pollinate crops and produce honey is why the Agricultural Research Service conducts research on ways to manage bee colonies in Africanized areas and works with states that are expecting AHBs to arrive. ARS scientists also work with groups like the American Beekeeping Federation, the American Honey Producers Association, and the Apiary Inspectors of America, providing expertise and consultation.

For example, when counties in Florida began to find Africanized honey bees, ARS helped provide information on a range of topics, such as how to protect pets from AHBs and emergency room care for multiple bee stings.

For most people, living in an area with AHBs means making minor changes, such as taking a little more caution when engaged in outdoor activities. For example, hikers need to be more aware of where they step. Before using mowers, people need to inspect the property for signs of a nest. Removing AHBs from buildings means calling on professional pest-control operators with experience with honey bees.

It was important that Florida make clear what concern AHBs really represent to avoid a negative impact on the state's residents as well as its tourism industry. When states have effective education and action plans in place, the public becomes vigilant, but remains calm when AHBs arrive.

On the other hand, some municipalities have reacted by trying to ban beekeeping in an attempt to keep AHBs from arriving. In reality, keeping the ecological niche filled with strong, healthy stocks of European honey bees is more effective in delaying the advance of AHBs.

The spread of AHBs into Florida and other new states during the last 2 years is particularly troubling to producers of queens and packaged bees, because they will have to find ways to prevent Africanization of their breeding stock. ARS researchers are helping advise bee breeders on what to be on the lookout for.

In addition to providing expert support and conducting research, ARS's lead lab for Africanized honey bees, the Carl Hayden Bee Research Center at Tucson, Arizona, also houses the unit responsible for official USDA identifications to confirm AHBs in new states. (See story on page 4.) This work is mostly in support of USDA's Animal and Plant Health Inspection Service, which has regulatory responsibility for invasive pests. The lab also does some identifications for state apiary inspectors, extension offices, and even an occasional beekeeper, and it helps train technicians when states set up ID labs.

The center's website is home to the map (www.ars.usda.gov/ahbmap) showing the spread of AHBs by county and by year. The map is now updated twice a year.

Just how far will AHBs spread in this country? No one knows for sure. In addition to natural spread, swarms also hitchhike on ships, planes, trains, and vehicles—called “human-assisted transport.” This is probably how AHBs became established in Florida, unconnected to the more contiguous spread in the Southwest. And because AHBs can invade and take over existing honey bee nests, they could become established farther north than originally expected. They could take over a nest and settle in with sufficient resources to survive cold weather.

Other times, hitchhiking swarms have been spotted and destroyed, as happened several Januaries ago when an AHB swarm traveled in oil-rigging pipes on board a ship from South America and then by truck to Maine, where the winter weather did most of them in. The few surviving AHBs were destroyed.

Because honey bees are essential to the success of U.S. agriculture, ARS will continue its research to find ways to continue to manage honey bees, no matter where AHBs spread.

Kevin J. Hackett

ARS National Program Leader
Biological Control and Bees
Beltsville, Maryland