

## Africanized bees advance slowly

Africanized honeybees, the highly defensive cousins of the familiar European honeybees, are still migrating toward heavily populated areas of Southern California, but slowly, according to a UC Riverside entomologist.



"Africanized bees are advancing into California more slowly than anyone expected; that's the good news. The bad news is they are still likely to expand their range into the urban areas of Southern California," says Kirk Visscher.

The so-called "Killer Bees" were originally released in Brazil and have since spread as many as 300 miles per year as they moved northward. They are known for vigorously defending their colonies and attacking in larger numbers than their European counterparts. Africanized bee attacks have killed at least four people in the United States since the bees' entry through Texas in 1990.

After Africanized bees reached western Arizona in 1993, public agencies braced for rapid expansion into Southern California. However, it was not until October 1994 that the first Africanized bee swarm was found in Riverside County, near Blythe.

This year, as of July 31, there have been 16 finds, 14 in Imperial County and two in Riverside County. The total for 1995 was 13 finds and one for 1994. These numbers show the Africanized bee population is increasing but so far finds do not indicate the range is expanding.

"The slow advance of Africanized bees has bought us time," says Visscher, who is a member of the Riverside County Africanized Bee Task Force and the California Africanized Bee Steering Committee. "Now, California is far better prepared to deal with these new bees than any area has been."

State, county and local agencies have organized to respond to Africanized bee swarms and attacks. UC Cooperative Extension and county agricultural offices have played leading roles in coordinating the response, and in public education and outreach.

Africanized bees are most likely to attack when their nests are disturbed. They establish

nests, or colonies, in virtually any cavity, including water meter boxes, wall voids, tree cavities, empty flowerpots and sometimes in the open. Bees swarm when a portion of a nest sets out to establish a new colony. The swarm settles on an intermediate site, often the limb of a tree, in a cluster of about 20,000 bees while the scouts locate a suitable nesting area.

Research has provided better tools for identifying and managing the bees (see p. 24). One new device to help manage swarms is Visscher's "Take-Out Trap," which attracts and kills "straggler" bees that remain after a swarm is removed by vector control officials or private pest-control operators.

"When a swarm is removed, some bees are away from the swarm cluster looking for a new nest site. When they return, everyone is gone so they go looking for the queen and the swarm cluster," Visscher explains. These wide-ranging stragglers can be especially troublesome because they are more likely to come into contact with humans or domestic animals.

The "Take-Out Trap" — named for the Chinese restaurant take-out carton it is made from — is baited with the same chemicals used by the bees to communicate with one another. So, straggler bees looking for the queen find a take-out container that smells like a queen bee and a lemony chemical that bees use to mark the queen's location. The searching bees enter the trap, but cannot readily leave because the entrance is a cone of screening. Once inside, they drown in a solution of insecticidal soap.

In time, Africanized bees will probably occupy most areas in Southern California, according to Visscher. "But, the slow spread we have seen recently is a good sign," he says. "It may mean the bees will not spread too much farther northward, and it also probably means that we have a better chance of modifying undesirable behavior of these new arrivals, thanks to the presence of established European honeybee colonies tended by beekeepers.

"Beekeepers' colonies compete with the Africanized bees for food, and European drones will mate with Africanized queens, and dilute the undesirable characteristics of the Africanized bee population," Visscher says.

— Kathy Barton