Africanized Bees

Africanized honey bees (Apis mellifera scutellata), are an aggressive subspecies of the European honey bee. They are present in South and Central America, and the southern United States.

Distribution

Africanized honey bees (Apis mellifera scutellata), are a subspecies of the traditional European honey bee. The result of breeding African honey bees with more docile European varieties, these bees have earned notoriety for their extreme behavior and highly aggressive response to perceived threats.

Africanized bees are the result of a breeding program that took place in Brazil. Scientists were attempting to cross-breed African bees with the less weather-resistant European variety.

The goal was to help create a bee more capable of withstanding the tropical weather and creating higher honey yields.

Several swarms escaped their South American quarantine in the late 1950s. Since then, they've migrated north through Central America and into the southern United States.

How it affects the hive

The highest risk from Africanized bees to apiaries is when a swarm takes over a European colony. Their aggression often leads to a full takeover of a hive. Africanized bees will often exploit weaker hives where several empty combs are present. Over time, they can continue expanding to additional colonies throughout an apiary. In severe cases, they can devastate an entire set of colonies and significantly impact a beekeeper's ability to harvest.

How it spreads

Africanized bees spread through frequent swarming, and swarm far more regularly than European honeybees. They can reproduce faster than European honeybees, and their larvae develop into adult bees in less time.

Africanized bees also produce more drones than European bees. Africanized drones mate with European queens, further spreading the distribution of the subspecies

Symptoms & detection

Identifying occasional Africanized bees in or near a colony often proves impossible due to the physical similarities they have with their European counterparts. However, beekeepers can typically identify the presence of Africanized bees using the following characteristics:

HIGHLY AGGRESSIVE HIVE DEFENSE

Research has shown that an Africanized colony guards the nest with up to five times more bees than European hives. As a result, their hive defense is visibly more aggressive and direct than many beekeepers are used to seeing. Even just a presence near a hive can signal an alarm across the hive and cause defensive behavior. If aggression noticeably increased, it may be a sign a hive has been infiltrated.

EXTREME ATTACKS

As mentioned, hive defence by Africanized bees is often characterized by more bees attacking keepers when near the colony.

BEES THAT PURSUE FOR LONGER DISTANCES/PERIODS

Agitated Africanized bees will typically pursue beekeepers or other perceived threats for much longer time periods and distances. In some cases, these bees have been known to pursue people up to 400 meters (1/4 mile) from their hives. While this extreme distance chasing is fairly uncommon, the bees will almost always remain agitated for longer periods of time than other species.

Prevention

In North America, maintaining strong hives with healthy bee populations is the best method beekeepers can use to keep Africanized bees out.

Africanized bees prefer areas with less competition for pollen and other resources. Africanized bees are less likely to infiltrate or take over a European hive if the hive maintains overall strength and wellness.

In much of South and Central America, Africanized bees are the most common bees kept by beekeepers. Keeping Africanized bees requires some adjustments in beekeeping practices, including keeping hives further away from residential areas, keeping hives further apart from each other, and using lots of smoke when working with hives.

Beyond North and South American apiaries, it is important to prevent the spread of Africanized honey bees throughout the rest of the world. Their unpredictability and highly aggressive behavior make them unsuitable for apiary operations.

Multiple operations have been put in place to help slow the spread of Africanized bees further into North America. However, this spread should also be a signal for continued reporting of Africanized bee presence and responsible hive management by beekeepers.

Treatment & control

It's important to maintain an ongoing reporting culture of Africanized bees to keep track of their current populations and potential expansion to further areas.

Beekeepers who suspect Africanized bee infestation should immediately notify their nearest beekeeping association or contact local pest control services to determine the next step. These professionals can help determine a responsible course of action to remove Africanized bee colonies and potentially salvage other hives.

Requeening with queens of known genetics is an option. More extreme populations may require additional intervention, including the full replacement of frames or the use of pesticides if all else fails.

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