Honey, These Dogs are on the Job

Maryland beekeepers are buzzing about dogs trained to sniff out honeybee-killing bacteria.

BY JODI HELMER

Cybil Preston had a good feeling about Tukka.

The English Springer Spaniel lacked confidence. He cowered when he heard loud noises and peed when he got scared—qualities that earned him a failing grade in K-9 officer training. But Preston knew he aced scent training and had a strong desire to work, which made him ideal for the role of canine apiary inspector.

"He is a working dog through and through," she says. "His stamina was stellar and it was very easy to motivate him to learn a new scent."

After six months of intensive training, Tukka became an official employee of the Maryland Department of Agriculture in January 2019.

Tukka visits commercial beekeepers with Preston, a certified master beekeeper and chief apiary instructor, to check hives for American Foulbrood (AFB), a fast-spreading contagious bacteria that decimates honeybee colonies. AFB has a strong odor and the 3-year-old dog was trained to recognize the scent; he sits beside the hive to alert Preston when he detects the bacteria.

What's the Buzz: Mack checks a commercial hive.

Maryland state law requires beehives to be certified AFB-free before beekeepers ship them across state lines to pollinate crops like almonds, apples, and blueberries. If the bacteria are confirmed, infected hives are destroyed or quarantined until treatment is complete (and deemed successful) to help protect the health of other honeybee colonies.

"Most of our commercial beekeepers have thousands of hives that travel from state to state for pollination," Preston explains. "It's our job to make sure that infected hives don't cross state lines [and] if we want to be efficient, we need to have a dog."

The Maryland Department of Agriculture has had a "bee dog" on staff since 1982. It's believed to be the only state agency in the nation that uses dogs to detect AFB.

Tukka is one of two AFB detection dogs on staff. He works alongside his "brother" Mack, a 6-year-old yellow Labrador Retriever that Preston trained to detect the scent of AFB in 2015.

Preston often inspects hundreds of hives at a time. The dogs speed up the process, inspecting 100 hives in as little as 45 minutes—a process that would take Preston, who has to

LEFT: ©WILLIAM JONES-WARNER/GETTY IMAGES; RIGHT: COURTESY MARYLAND DEPARTMENT OF AGRICULTURE

open each hive to perform a visual inspection, 10 times as long.

Even beekeepers who aren't shipping their hives out of state (and don't require inspections) have requested visits from Tukka and Mack to check their hives for AFB. The added inspection helps keep the bacteria in check, which is good for bee populations.

The dogs work from November to April when temperatures are cooler and the bees are less active, reducing the risk of getting stung.

During inspections, Preston lets Mack check the apiaries and then runs Tukka through the hives for a second opinion; at the next stop, Tukka goes first and Mack follows. Their ability to sniff out the fatal bacteria is the first line of defense for preventing the spread of AFB—and the dogs are good at it. Tukka has just started his first season on the job, but Preston believes he'll be as accurate as his brother.

Hive Minds: Tukka and Mack on the job

Tukka almost didn't get the job.

In 2017, Preston adopted a Beagle named Clark from a local rescue group and trained him to sniff out AFB alongside Mack. Despite having an excellent nose, Clark had a poor work ethic.

"He knew the scent but [his willingness to detect it] was hit or miss depending on how he felt at that moment," she recalls. "When he was separated from Mack, his training declined. He wouldn't even work for a hot dog; he didn't want to work solo, and he needed to be able to continue working when Mack retires."

After three failed attempts to pass the exam to earn certification as a working dog, Preston adopted Clark into her pack and he transitioned from working dog to retirement.

He naps at home when Mack and Tukka head out to work in the morning.

Transitioning from K-9 officer-in-training to apiary inspector proved to be a good move for Tukka.

While he was training for the new role (and passing the Maryland Department of Public Safety and Correctional Services exam to earn his certification as a detection dog), Tukka was also learning how to be a pet.

Tukka lived in a kennel during his police training and Preston notes, "he was handled but not held. He is such a snuggle bug and when he came here, he came out of his shell and became a lot more confident; the change in environment was huge for him."

A few months after Preston adopted Tukka, he stopped cowering and blossomed into an affable companion.

Both dogs have earned a lot of press and praise for their work, helping to raise awareness of the threats to honeybee populations and the potential for dogs to help prevent the spread of AFB.

Mack and Tukka have been so effective—and adorable—in their roles that Preston says states like Wisconsin, Maine, and Massachusetts are exploring the option of training their own canine apiary inspectors.

"The dogs can be a great asset in states with long periods of cold weather when bees are dormant, but a lot of state departments of agriculture lack the budget or the staff to start a program like this," Preston says. "It's such a great program for us and we want to keep it going."

Preston hopes to train another AFB detection dog to work with an apiary inspector in another part of the state. She hopes that Mack will remain on the job for several more years and knows that when he retires, Tukka will continue the legacy on his own.

For Preston, working alongside the dogs makes apiary inspections more efficient and enjoyable.

"Every single day can be an inspection day," she says. "I can't imagine doing it without the dogs." **FD**

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Jodi Helmer writes about animals and the environment, often with a dog (or two) in her lap.