Calif. pest trapper helps thwart citrus disease

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In this photo taken July 11, 2011, Taylor Henderson, left, and Caspian Taylor scan traps for the Asian citrus psyllid at the Citrus Research Board office in Visalia, Calif. The Asian citrus psyllid, a tiny gnat size pest that can carry a disease deadly to citrus trees, has already crippled and wiped out groves in Latin America, India, the Middle East and in Florida. California, which ranks second in the nation after Florida in citrus production, is now the most important front in the fight against the psyllid, because the pest has been found here _ but so far without the disease. (AP Photo/Gosia Wozniacka)

(AP) -- On a bright July morning, Adam Marler punched locations into a GPS device and set off in his pickup truck from Fresno into the back roads and citrus orchards of California's Central Valley.

His mission: to thwart the invasion of the Asian citrus psyllid, a pest the size of a rice grain capable of carrying a disease deadly to citrus trees.

The disease, known by its Chinese name Huanglongbing but also called "citrus greening," has devastated citrus orchards in Florida and other parts of the world, but it hasn't touched California's $1.8 billion industry. The Golden State ranks first in the nation in crop value and second after Florida in citrus production.

Marler, who works for the California Citrus Research Board, is one of 18 pest trappers who fan out daily across far-flung commercial groves to trap the psyllid and electronically map the tiny beast's every move.

"It's kind of like a war," Marler said, "and California is the last frontier."

California's approach is novel, because it's preemptive: it aims to eliminate the bacteria carrier before it can spread the disease. That's because, unlike in Florida and elsewhere, relatively few invasive psyllids have made it to California thus far.

"We have a unique opportunity to be proactive in managing this insect to either prevent the introduction of the disease or to slow its movement," said Citrus Research Board data director Richard Dunn.

Florida's woes led California growers to consider the new approach. The invasive psyllid first arrived to Florida in 1998, but officials didn't recognize its threat. When they first detected the disease six years later, the Asian citrus psyllid population had exploded and the disease spread like wildfire - a fate California hopes to avoid, said the board's president Ted Batkin.

Florida is now losing trees to the infection at a rate of 15 percent a year, Batkin said, which means removing and replacing thousands of trees, an expensive process.

The trapping program was Batkin's brainchild; he and other industry

leaders came up with the idea after visiting diseased orchards in Brazil.

"The trees looked like skeletons," Batkin recalled. "It was like a blowtorch had come along and just fried them. It was scary. It got our attention real fast."

Three years ago, the Citrus Board set out to hire trappers.

On this day, about seven miles north of tiny Centerville, Marler's truck roared down the paths of a hilly lemon grove. Bob Dylan humming from an iPod, Marler skirted ditches and gates, bounced through an empty pasture and up a stony road in search of a lemon tree.

He found it, hung a bright yellow rectangular trap on its branch and scanned the old and new traps, as well as the tree tag, into his GPS device. He also surveyed the tree for signs of disease.

Huanglongbing is hard to detect, Marler said, because the bacteria can be present in a tree for a year or longer before symptoms are visible. Once infected, the tree dies within five years. Typically, a healthy lemon tree is productive for up to 25 years, a grapefruit tree for up to 50 years and an orange tree for up to 75 years.

No known pesticide can combat the disease. It can only be eliminated by finding and eliminating the insect carrier. The trap's yellow color attracts psyllids, but they're too tiny to distinguish with the naked eye. Back at the Citrus Board office, workers survey the traps with giant magnifying glasses.

Marler, 30, sets about a dozen traps every hour. Overall, he's responsible for 700 traps, swapping each twice a month. He and fellow trappers set up nearly 8,000 traps -- roughly one every quarter mile in every commercial citrus orchard in the state. The trapping program is funded

by commercial citrus growers, who tax themselves 9 cents per every 40 pound bin of picked fruit to pay for it.

The state also sends out trappers into residential areas. So far, more than 10,000 invasive psyllids - all without the bacteria - have been found in ornamental/backyard trees in Southern California.

Last month, a trapper found the first Asian citrus psyllid in a California commercial citrus orchard near the community of Moorpark in Ventura County. Marler immediately received a text message with the news, which reminded him of the urgency of his work.

Beyond that electrifying moment, trapping is a quiet, solitary affair. Marler can go for days or a week without speaking to anyone, though he occasionally runs into coyotes, rabbits and road runners.

When his truck got stuck in mud, an indignant farmer had to pull it out with a tractor. Another time, Marler was stranded in a field for hours when the truck broke.

Between traps, Marler - who graduated in 2007 from Fresno State University as an English major - listens to music, radio podcasts and recorded books.

"I got my music, my audio books, so I don't mind working by myself," Marler said. "And I like being outside rather than stuck in an office."

At the end of a work day, Marler transmits his GPS data to a central database. Trap information from around the state appears on a live online map, available to farmers who pay for the program. They can keep track of where traps, psyllids and quarantine areas are. In the event of the disease's outbreak, they can track how close the disease is to their groves.

That technology, Batkin said, is the best known method to date to fight the disease.

"We're about as close to a cure as the medical industry is to curing cancer," Batkin said. "We know a lot about the disease, but we're about 15-20 years away from a solution."