

Audio Report Transcript:

Headline: Invasive Mosquito Risks Spread of
Deadly Diseases in California

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Text:

California counties are waging war on a certain type of mosquito to prevent the spread of tropical diseases throughout the state. This is a report for *California Healthline*, a daily news service of the California HealthCare Foundation. I'm Deirdre Kennedy.

In an upscale suburb near Palo Alto, biologist Kim Keyser goes door-to-door, on the hunt for a potential killer.

(Keyser): "I'm with San Mateo County mosquito and vector control. We're here to inspect the outside yards, looking for the new invasive mosquito that was found at the cemetery down the street."

(Sound of Keyser looking around the yard, picking up covers, etc.)

Keyser's team collected that first specimen when it was still a tiny egg. Back in the lab, it hatched and developed the striking black-and-white features that identified it as *Aedes aegypti*, commonly known as the yellow fever mosquito. The theory is that it got to the cemetery in a bunch of flowers.

(Kim): "Since then we have found other adults and eggs, so... we're continuing our search, to collect everything before it gets even further away from the cemetery."

Keyser inspects every square foot of this property for spots where so-called "container breeders" like *Aedes aegypti* might lay their eggs. Under some leafy rhododendrons, she finds a plant saucer full of scummy brown water.

(Keyser): There are a lot of mosquitoes in this saucer. I see all stages too, from just hatched to pupae."

She siphons the water with a turkey baster and squirts it into a plastic deli container.

(Keyser): "I'm going to try to get all of them if I can."

She'll take the sample to the lab for identification and spray insecticide on any others she finds.

(Morrow): "This is a very nasty, aggressive day-biting mosquito, and it certainly could compromise quality of life in this area."

San Mateo County health officer Scott Morrow says the goal is to completely eradicate this species.

(Morrow): "What I'm more concerned about in the long term is this mosquito is a competent vector of a number of viral illnesses, including dengue, yellow fever and the like."

Some of those mosquito-borne viruses can lead to hemorrhagic fever or encephalitis. Dengue infects millions of people around the world and is much more common than the yellow fever or West Nile viruses.

(Morrow): "Dengue fever is somewhat similar to flu, it starts with a very severe headache, very high fever, a lot of muscle aches. Most people are asymptomatic, very similar to West Nile Virus. About 80-85% of the people who get it will just not even know they have it. And a certain portion of those will go on to get an extraordinarily serious illness that can cause death."

Yellow fever and dengue cases turn up in California each year among people who have travelled to regions where those diseases are endemic. Until now, there has been no vector here to spread the viruses. But Steve Mulligan, district manager for the consolidated mosquito abatement district in Fresno County, says that could change soon.

(Mulligan): "However now that the vector of these diseases has been found in our areas, the possibility for local transmission exists when we have new imported cases in California. And that's troubling. Very troubling."

Although *Aedes aegypti* normally lives in tropical and sub-tropical zones, it has apparently found the perfect microclimates in some parts of California, says entomologist Russell Parman.

(Parman): "In an arid habitat like the Central Valley now, we have these Aedes aegypti that were all over the city of Madera by the time they discovered it. Now we don't know if that mosquito is going to survive, but obviously something's been going on there for quite some time."

Parman is acting director of Santa Clara County's vector control district. In his lab, researchers breed a number of species that carry West Nile and other viruses to study mosquito behavior and develop ways to control their population.

(MOSQUITO HUMMING)

(Parman): "Mosquitoes make lots and lots of babies. Eighty or 90% of those will never reach adulthood, but they make so many babies that the numbers can become quite overwhelming because you might have 500 to a 1,000 progeny just from one female."

A few days after they hatch, females start feeding on humans to ripen a new cycle of eggs. That's when they can transmit viruses from one person to another. Even though California leads the world in effective mosquito control, Parman says, it will take the whole community to defeat these tropical invaders.

(Parman): "When these container breeders come in, if they come in, they're going to be everywhere, any place with standing water. So we can't go out and locate a marsh. We can't locate a puddle on a curb. It's on everybody's individual properties, so what we're going to have to do is very thoroughly and heavily educate the public so people can resolve those problems locally."

Other counties have been helping Fresno and Madera by setting up surveillance tools and providing staff. They're urging residents to do their part by tossing out standing water, rinsing pet water bowls often, and most importantly -- reporting any daytime mosquito bites to local abatement staff so they can stay one step ahead of the bugs.

This has been a report for *California Healthline*, a daily news service of the California HealthCare Foundation. If you have feedback or other issues you'd like to have addressed, please email us at CHL@CHCF.org. I'm Deirdre Kennedy, thanks for listening.