MOSQUITO and VECTOR MANAGEMENT DISTRICT of SANTA BARBARA COUNTY

DISEASE SURVEILLANCE REPORT

January 2025

Santa Barbara County Vector-borne Disease Surveillance

Two dead birds from Santa Barbara County were reported to the state hotline in January. Samples were collected from a house finch from Lompoc and a crow from Goleta, and samples were sent for testing. Results are pending. Despite 186 mosquito samples (4,231 mosquitoes total) submitted, there were no detections of West Nile virus (WNV) in the County in 2024. St. Louis encephalitis virus (SLE) and Western equine encephalitis virus (WEE) have never been documented in the County.

The District did not conduct any mosquito trapping in January as nighttime temperatures are too low for mosquitoes to be active and many species are inactive during the winter months.

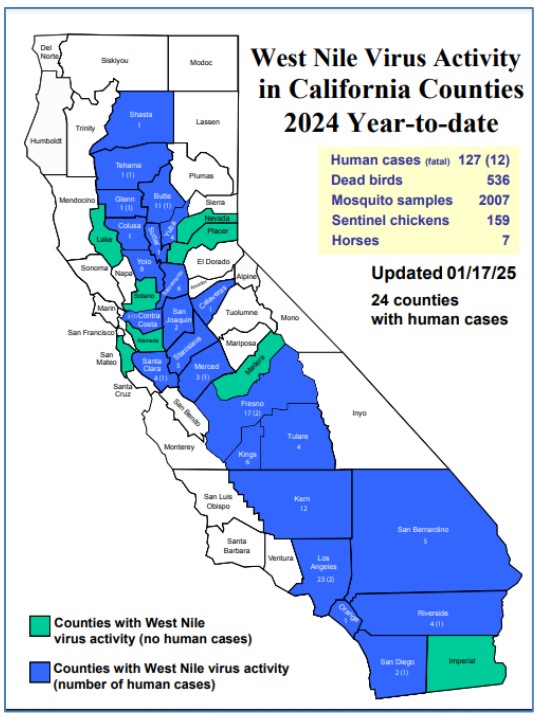
Tick Surveillance

On January 24, 2025, 3 female and 4 male, black-legged ticks (*Ixodes pacificus*) were collected on Bella Vista Ranch Trail, Greenwell Preserve, Summerland. A resident stated their cat had been coming home from that area covered in ticks.

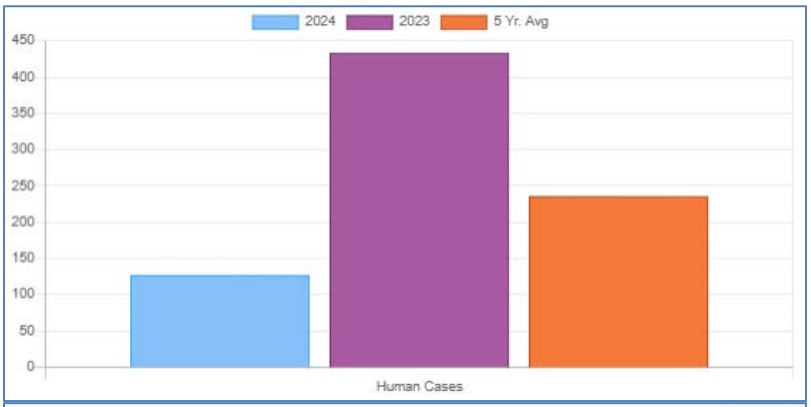
Visit https://www.mvmdistrict.org/tick-talk for an explanation of tick flagging and more information about ticks.

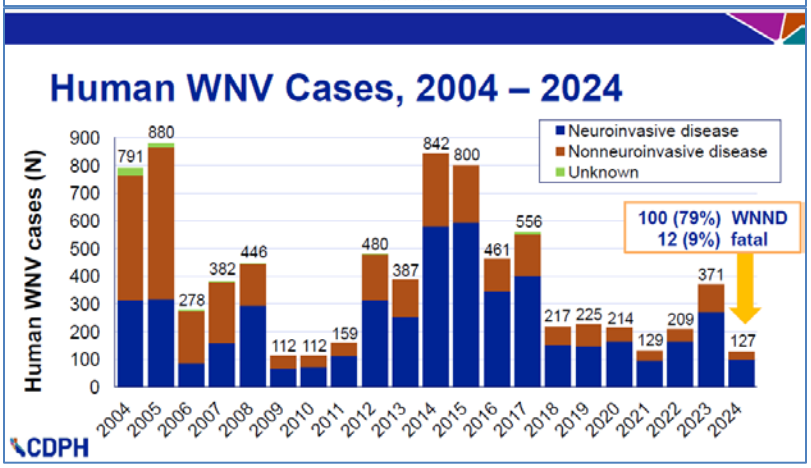
California Vector-borne Disease Surveillance

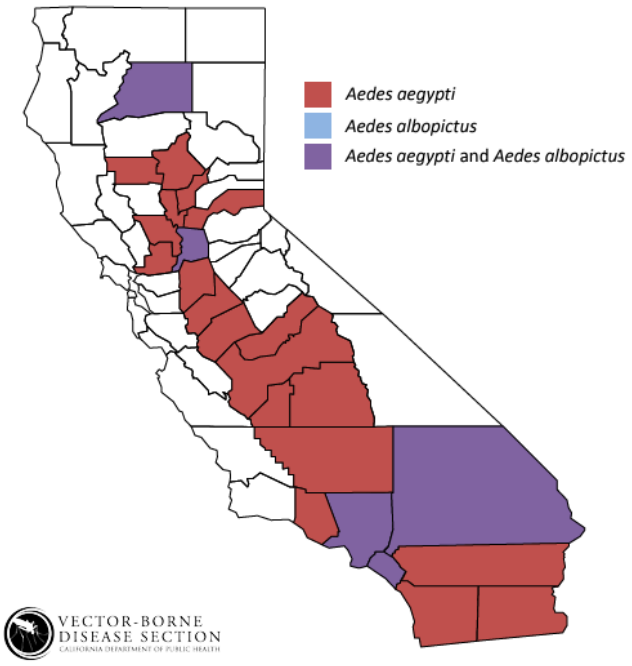
Weekly arbovirus bulletins from the California Department of Health have finished for the season. Thirty-two counties reported samples positive for West Nile virus in 2024. Of the 124 human cases of WNV, 95 were neuroinvasive, and 12 were fatal. There were an additional 16 asymptomatic blood donors. More than half of the 536 WNV-positive dead birds in California were collected in Santa Clara County. Thirty-four mosquito pools from five counties tested positive for SLE; in 2023, there were 728 positive SLE samples across 15 counties. There have been no detections of WEE.



https://westnile.ca.gov







Update on Invasive *Aedes* Mosquito in California

No invasive *Aedes* species have been detected in Santa Barbara County since May 2021. *Aedes aegypti* is found in 24 California counties, and *Aedes albopictus* is found in five.

There were 18 locally transmitted cases of dengue virus in Los Angeles County (12), San Bernardino County (1), and San Diego County (4) in 2024. Non-native *Aedes* mosquitoes, capable of vectoring dengue, Zika, chikungunya, and yellow fever are common in the Greater Los Angeles area. As of December 18, 2024, there have been 469 travel-related human dengue cases in California; there have been 20 travel-related cases of chikungunya virus and three travel-related cases of Zika virus. There were five cases of travel-related dengue in Santa Barbara County last year. Worldwide, the number of dengue cases more than doubled—6.5 million in 2023 to 14 million in 2024 (10,000 deaths).

Selected Slides from the 2025 Mosquito and Vector Control Association of California (MVCAC) Annual Conference held Jan. 26-28.

Week	Topic	Manual	Pages to Read	Lecture Time	Quiz	Instructors
1	INITIAL ASSESSMENT					
2	Emergency Response Introduction	Mosquito Management During a Public Health Emergency	4-7	13:18	1	Chelsea Gridley-Smith Leigh-Anne Lawton
3	Mosquito Biology and IMM	Best Practices for Integrated Mosquito Management	13-19	22:29	2	Jennifer Gordon Dan Markowski
4	Preparing, Planning and Training	Mosquito Management During a Public Health Emergency	19-23 (25-29)	32:30	3	Micheal Doyle Susanne Kluh
5	ER Community Engagement	Mosquito Management During a Public Health Emergency	10-13	26:22	4	Andrea McKinney Madison Verhulst
6	ER Surveillance	Mosquito Management During a Public Health Emergency	7-9	27:43	5	Whitney Qualls Lee Green
7	BREAK/ALTERNATE					
8	Mapping and Data Management	Best Practices for Integrated Mosquito Management	49-53	22:34	6	Dan Markowski Chris Barker
9	ER Mosquito Control Operations	Mosquito Management During a Public Health Emergency	9-10	15:26	7	Lee McPhatter Michelle Selander
10	Monitoring and Managing Insecticide Resistance	Best Practices for Integrated Mosquito Management	79-81	20:00	8	Alden Estep Lindsay Baxter
11	Roles and Responsibilities	Mosquito Management During a Public Health Emergency	14-18	31:03	9	Marah Clark Stephanie Madson
12	Record Keeping and Data Integrity	Best Practices for Integrated Mosquito Management	82-84	24:52	10	Nina Dacko Angela Beehler

- 6 New Video modules covering all aspects of responding to a mosquito-borne emergency
- At the end, learners will:
  - Have an understanding of mosquito biology, surveillance needed, control options, requirements for FEMA reimbursement, record keeping, and more
  - Understand all process needed for preparing a Response Plan
  - Know how to perform components critical to science-based mosquito control
- Participants can earn a certificate to provide verification of training or just show off at parties.
- Can also take the modules individually – you don't have to do the entire course.

AMCA
THE AMERICAN MOSQUITO CONTROL ASSOCIATION

The American Mosquito Control Association has expanded its free virtual training program. No continuing education credits are offered at this time. https://www.mosquito.org/webinars-training/

Surveillance Results, Pasadena 2023

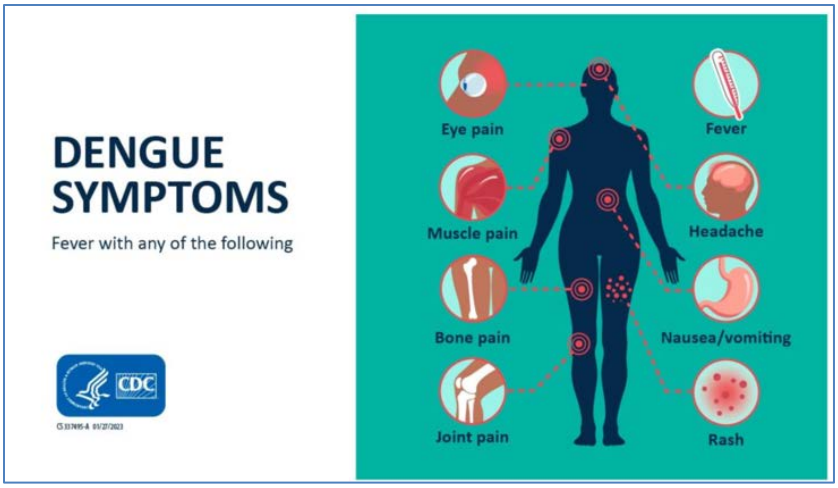
October 4th, 2023

through

November 15th, 2023

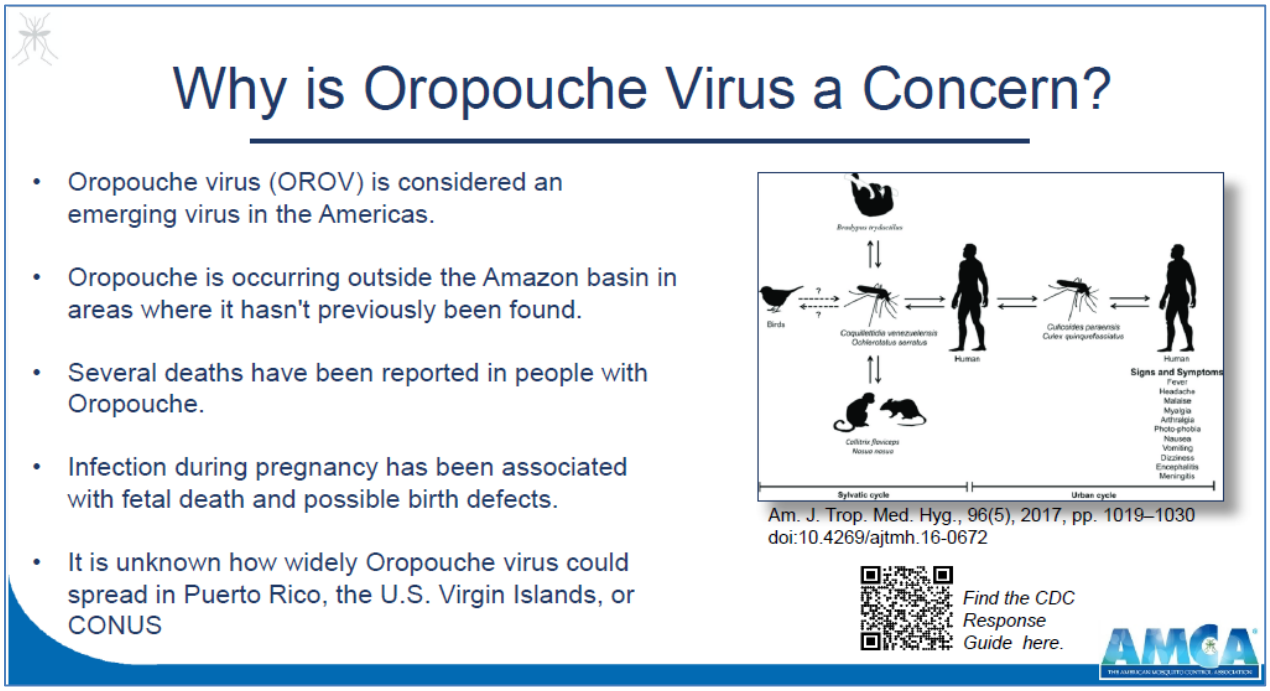
Traps Deployed	75
Aedes Samples Tested	140
Labor Hours	134
Investigation Cost	$7,758
Local Cases Confirmed	2

San Gabriel Valley Mosquito and Vector Control District's response to 2 cases of locally-transmitted dengue virus in 2023. In 2024 they responded to 7 cases, inspecting 640 out of 848 properties; the cost was over $60K.

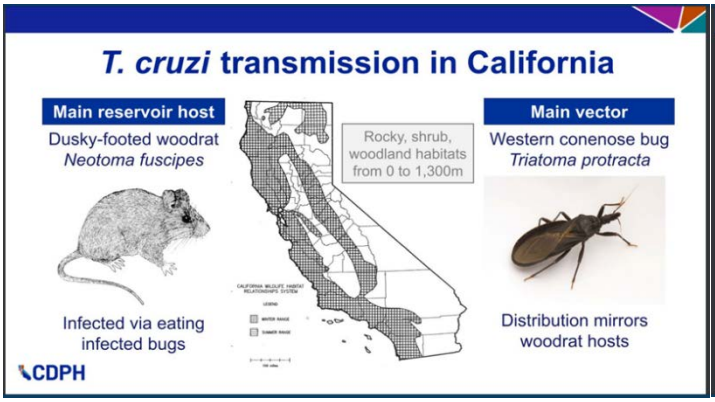


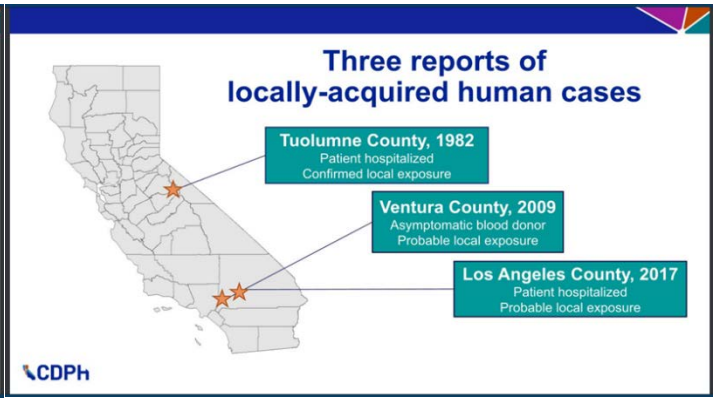
The CDC recommends the following for travel to regions with dengue: pack mosquito repellent and use it, stay in places with air conditioning or at least window screens. If dengue symptoms are noticed use acetaminophen rather than NSAIDs (aspirin, ibuprofen, naproxen) that thin the blood. If symptoms are felt after returning, recover indoors to prevent mosquito bites that could transmit dengue virus to other people.

Contra Costa Mosquito and Vector Control used Nextdoor to invite community members to a meeting about the work they were doing to stop the spread of invasive *Aedes* in the neighborhood.

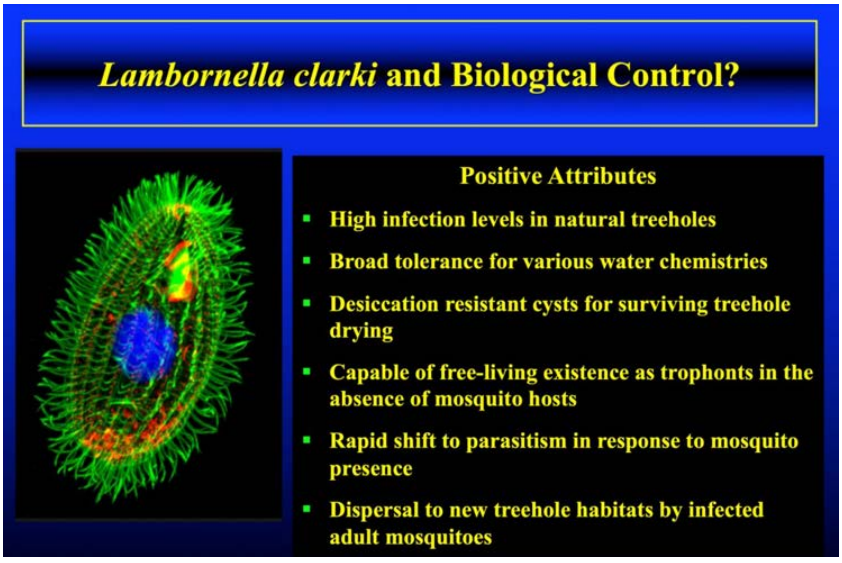


The AMCA will be developing education materials, evaluating vector presence, and determining control options for biting midges that could transmit Oropouche virus.

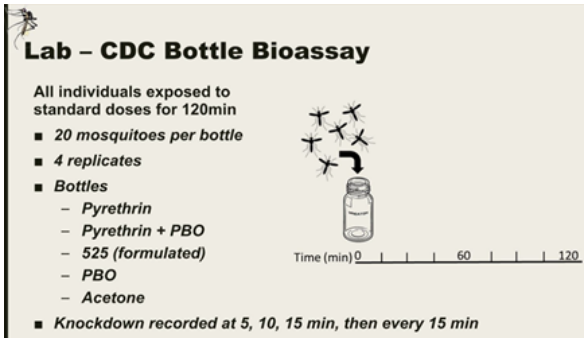




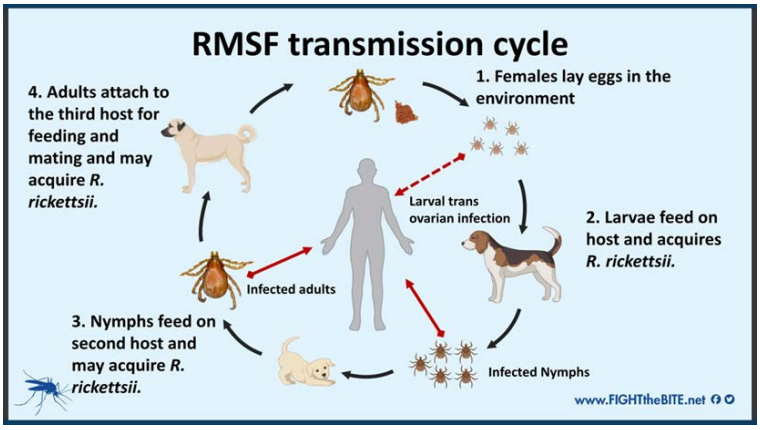
American trypanosomiasis, AKA Chagas disease, is rare but possible in California.



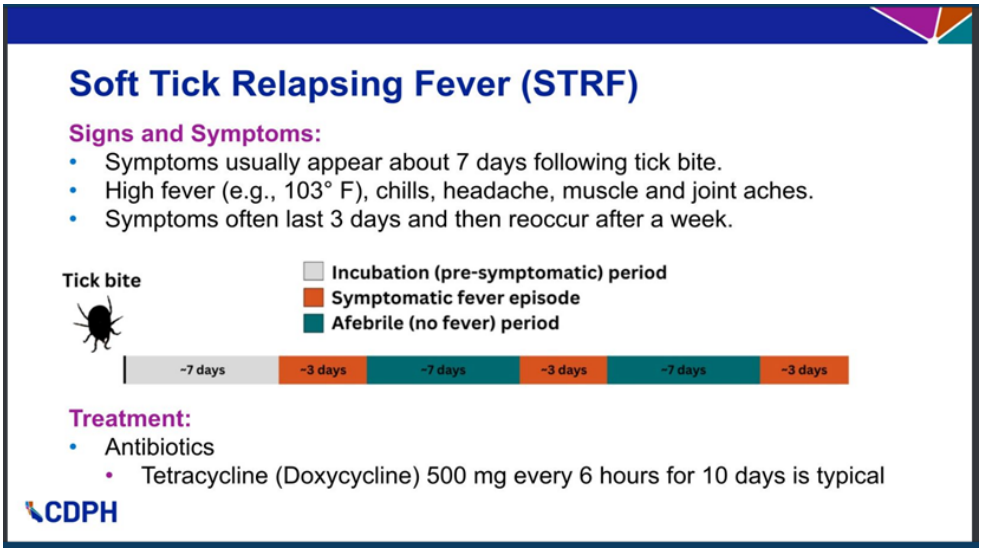
L. clarkii is a natural parasite of western tree hole mosquitoes, *Aedes sierrensis*.



Agencies that use adulticides need to test mosquito populations for resistance to these chemicals used for mosquito control.



Borrelia hermsii is transmitted by soft ticks, which are usually found in bird or rodent nests.



Rocky Mountain spotted fever, *Rickettsia rickettsii,* is vectored by ticks.