



## MOSQUITO and VECTOR MANAGEMENT DISTRICT of SANTA BARBARA COUNTY

# DISEASE SURVEILLANCE REPORT

August 2023

### Santa Barbara County Vector-borne Disease Surveillance

One dead bird was reported in Santa Barbara County in August, but it was ant-infested and, therefore, no sample for virus testing was collected. To date, there has been no WNV activity in the County in 2023. St. Louis encephalitis virus and Western equine encephalitis virus have never been documented.

Location	Date	Number of Mosquitoes	Type of Trap	# of Traps	Mosquitoes per Trap Night	Pools Submitted	WSW Virus Test Result
Oceano Dunes, SLO	8/1-8/2	879	EVS	6	146.5	12	Negative
Chumash Park, SLO	8/1-8/2	52	EVS	3	17.3	1	Negative
Pismo Creek, SLO	8/1-8/2	32	EVS	3	10.7	1	Negative
UCSB/SBAir Bluffs	8/8-8/9	388	EVS	12	32.3	7	Negative
Mission Hills CSD	8/15-8/16	5	Gravid	1	5	2	Negative
Mission Hills CSD	8/15-8/16	0	Black flies	4	0	0	--
		54	EVS				
Los Prietos Ranger Station, Paradise Rd.	8/15-8/16	22	Black flies	5	4.4	2	Negative
		65	EVS				
Los Prietos Ranger Station, Paradise Rd.	8/15-8/16	6	Gravid	1	6	2	Negative
Solvang Sanitary District	8/15-8/16	22	Black flies	3	7.3	2	Negative
		210	EVS				
Solvang Sanitary District	8/15-8/16	7	Gravid	1	7	2	Negative
MVMD, Summerland	8/22-8/23	9	Gravid	1	9	2	Negative
Shoreline/More Mesa	8/29-8/30	70	EVS	8	8.75	2	Negative
Shoreline/More Mesa	8/28-8/31	208	Gravid	2	34.7	6	Negative
Goleta Sanitary District	8/29-8/30	10	EVS	3	3.3	2	Negative
Goleta Sanitary District	8/28-8/31	3	Gravid	3	2.2	3	Negative
Crescent Ave., 93105	8/1-8/9	1	BGS2	1	0.1	0	--
Chino St., 93101	8/1-8/9	0	BGS2	1	0	0	--
UCSB Fire Station	8/1-8/9	0	BGS2	1	0	0	--
MVMD, Summerland	8/1-8/31	0	BGS2	1	0	0	--

BGS2=Biogents Sentinel 2      BGP=Biogents Pro      EVS=encephalitis surveillance trap (CO<sup>2</sup>)

WSW=West Nile Virus, St. Louis Encephalitis Virus, AND Western Equine Encephalitis

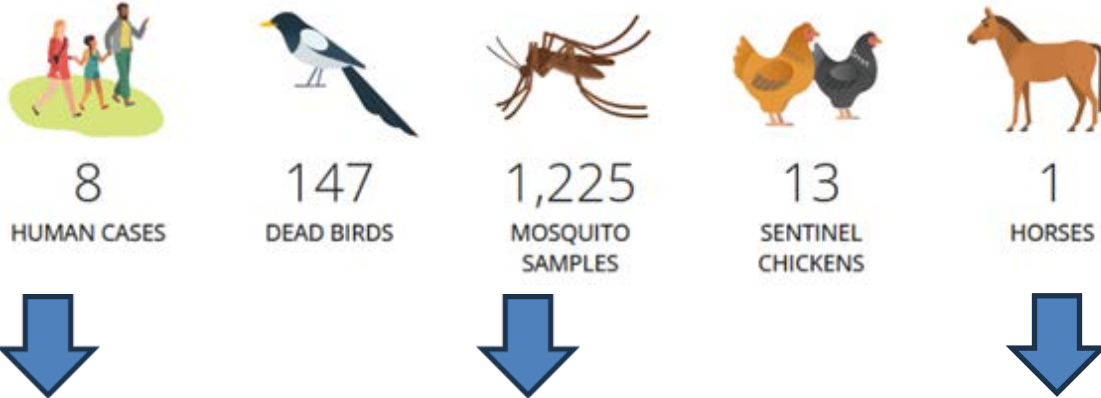
\*Color indicates the virus-transmitting ability of some or all of the mosquito species caught in the traps:

Purple = high (example: *Aedes aegypti*, *Culex tarsalis*); Aqua = moderate; Tan = low. For specific trap collection data, please email a request to: [info@mvmdistrict.org](mailto:info@mvmdistrict.org)

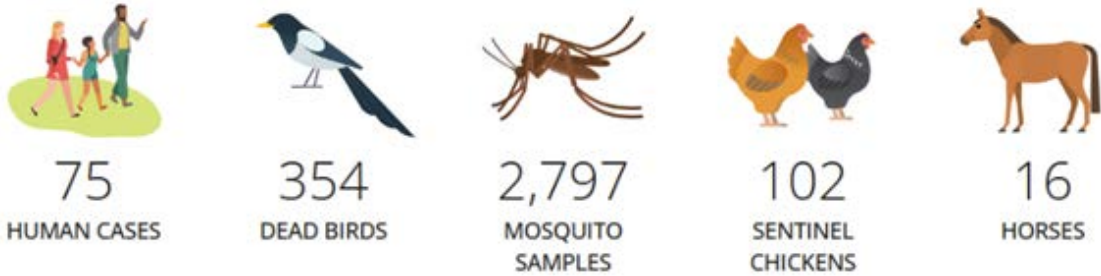
## California Disease Surveillance

California West Nile virus detections greatly increased in August. As of September 1, WNV has been detected in 36 counties; five human cases were fatal. Saint Louis encephalitis virus has been detected in 11 inland CA counties this year. One human case of SLE has been reported in Kern County in 2023; at this time last year, three human cases had been reported.

California WNV activity as of July 28, 2023



California WNV activity as of September 1, 2023



<https://westnile.ca.gov>

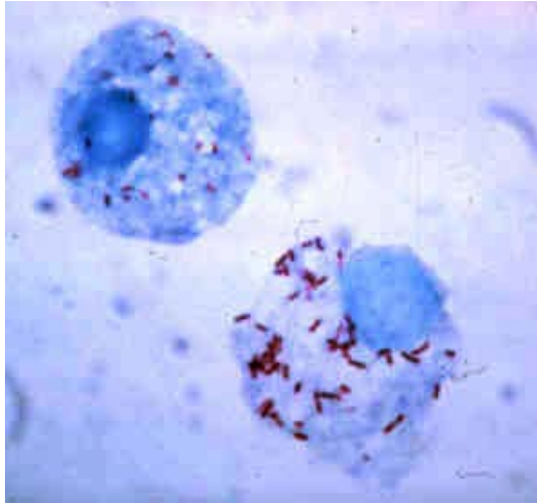
2023 human cases of WNV in CA are more than double last year's and almost double the average of the last 5 years



<https://westnile.ca.gov>

## Invasive *Aedes* Mosquito and Zika Virus Update

No invasive *Aedes* species have been detected in Santa Barbara County since May of 2021. Only *Culex* mosquito larvae were present in the nine *Aedes aegypti*-targeting In2Care stations. *Aedes aegypti* are found in 25 California counties, and *Aedes albopictus* is found in five.



Cell infected with *Rickettsia rickettsii*. CDC image

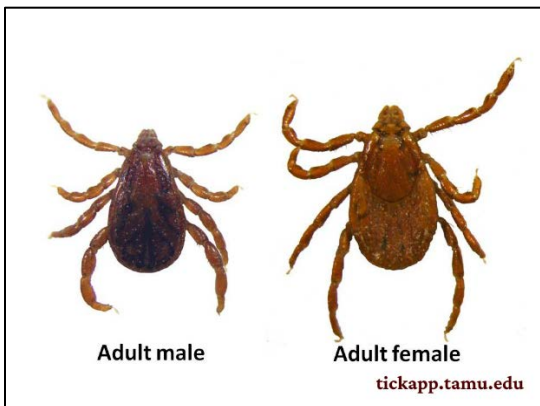


Source: K.J. Knopp, L.B. Slack, A.B. Stovrow, R.J. Thurman. The Atlas of Emergency Medicine, 4th Edition, www.accessemergencymedicine.com. Copyright © McGraw-Hill Education. All rights reserved.  
RMSF rash

## Rocky Mountain Spotted Fever—*Rickettsia rickettsii*

A Washington Post article on August 29\* featured the deadly epidemic of Rocky Mountain spotted fever (RMSF) in the Mexican state of Baja California and in Arizona tribal reservations. Some of our colleagues in the U.S. Centers for Disease Control-funded Pacific Southwest Center of Excellence in Vector-borne Disease (PacVec) assisted with the investigation.

RMSF is caused by the bacteria *Rickettsia rickettsii* and results in a rash, fever, body aches, headache, and nausea; blood vessel damage can lead to amputations or possibly death. Children are especially vulnerable. RMSF can be successfully treated with the antibiotic doxycycline.



Adult male

Adult female

tickapp.tamu.edu

*Rickettsia rickettsii* is transmitted by tick bites. Tick vector species include the American dog tick (*Dermacentor variabilis*), brown dog tick (*Rhipicephalus sanguineus*), and Rocky Mountain tick (*Dermacentor andersonii*). The brown dog tick is the vector in the epidemic in Baja. Overpopulation of stray dogs has created a reservoir for the bacteria, and researchers have found that brown dog ticks are more likely to bite humans instead of dogs in very hot weather. Dogs can also suffer and die from RMSF.

*Rhipicephalis sanguineus*, the brown dog tick, is not commonly found in Santa Barbara County

\* <https://www.washingtonpost.com/health/interactive/2023/tick-diseases-rocky-mountain-spotted-fever/>

CA Dept. of Public Health Fact Sheet on *Rickettsia*:

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/SpottedFeverRickettsiaFactSheet.pdf>