



**MOSQUITO and VECTOR MANAGEMENT DISTRICT  
of SANTA BARBARA COUNTY**

**DISEASE SURVEILLANCE REPORT**

**August 2021**

**Live Mosquito-Borne Virus Surveillance**

<b>Location</b>	<b>Date</b>	<b>Number of Mosquitoes</b>	<b>Type of Trap</b>	<b># of Traps</b>	<b>Mosquitoes per Trap Night</b>	<b>Pools Submitted</b>	<b>WSW Virus Test Result</b>
Oceano Dunes, SLO	8/4-8/5	330	EVS	4	82.25	6	Negative
Pismo Golf Course, SLO	8/4-8/5	40	EVS	2	20	1	Negative
Pismo Ecological Reserve, SLO	8/4-8/5	21	EVS	1	21	2	Negative
Chumash Park, SLO	8/4-8/5	56	EVS	2	28	4	Negative
Pismo Creek, SLO	8/4-8/5	8	EVS	1	8	1	Negative
Bird Refuge, SB	8/11-8/12	42	EVS	5	8.4	1	Negative
Bird Refuge, SB	8/11-8/12	10	BGP	2	5	1	Negative
Orella St., SB 93105	8/1-8/17	20	BGS1	1	1.25	0	---
MVMD Summerland	8/1-8/17	10	BGS1	1	0.625	0	---
Evergreen Park, Goleta 93117	7/6-7/9	84	Gravid	3		2	Negative
El Carro, Carpinteria	8/11-8/17	5	EVS	BGS2	0.83	0	---
Bird Refuge, SB	8/6-8/17	44	Gravid	2	4	1	Pending
Student Health Building, UCSB	8/25-8/26	3	EVS	1	1	0	---
UCSB/SB Airport Bluffs	8/25-8/26	88	EVS	8	11	2	Pending
UCSB/SB Airport Bluffs	8/25-9/1	109	Gravid	1	18.2	2	Pending
Student Health Building, UCSB	8/25-9/1	161	Gravid	1	26.8	3	Pending
UCSB/SB Airport	8/26-9/1	11	BGS2	1	1.8	0	---
Student Health Building, UCSB	8/25-9/1	7	BGS2	1	1	0	---
Coal Oil Point UCSB	8/31-9/1	0	EVS	3	0	0	
North Campus Open Space (NCOS), UCSB	8/31-9/1	18	EVS	6	3	1	Pending
Between Coal Oil Point and NCOS, UCSB	8/31-9/1	2	EVS	3	0.67	0	---
North Hope area, SB*	8/2-8/17	0	BGS2	2	0	0	---
Orella St. SB 93105	8/18-8/30	0	BGS1	1	0	0	---
MVMD Summerland	8/18-8/30	0	BGS1	1	0	0	---

BGS2=Biogents Sentinel; EVS= CO<sub>2</sub> trap; WSW=WNV, SLEV, AND WEE; BGP=Biogents Pro

\* Area where *Aedes aegypti* was first detected.

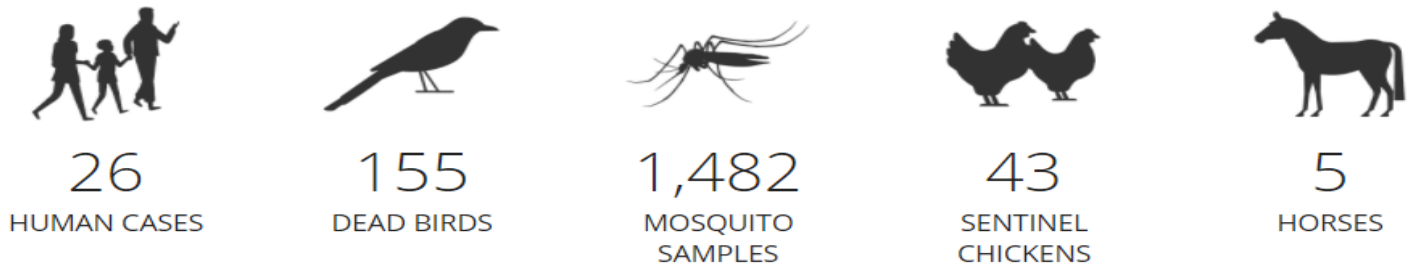
## California Department of Public Health, Vector-Borne Disease Section

The CDPH VBDS released its 2020 annual report: <https://westnile.ca.gov/pdfs/VBDSAnnualReport20.pdf> West Nile virus continues to be the most widespread vector-borne disease, causing 11 deaths in 2020. St. Louis encephalitis virus may also pose an increasing threat with the only fatality other than the 11 caused by WNV. There were cases of travel-related diseases that can be transmitted by invasive *Aedes* mosquitoes: dengue virus (83), chikungunya virus (5), and Zika virus (5). Invasive *Aedes* mosquitoes increased their range in California by 6 counties in 2020. There was one human case of plague, and the pathogen was found in six California counties. A Santa Barbara County resident was one of two non-fatal hantavirus infections last year. There were 109 human cases of flea-borne typhus, of which 95% required hospitalization. In 2020, 63 people tested positive for Lyme disease in California. Northern California saw seven cases of tick-borne anaplasmosis and four cases of tick-borne relapsing fever.

## California Arbovirus Bulletin

California is in peak season for West Nile virus. WNV was detected for the first time this year in Ventura County (dead bird).

California WNV totals January 1-August 31, 2021:



California WNV totals January 1-July 31, 2021:

	HUMAN CASES	DEAD BIRDS	MOSQUITO SAMPLES	SENTINEL CHICKENS	HORSES
STATE TOTALS	4	94	563	10	1

Nineteen mosquito pools have tested positive for St. Louis encephalitis in Fresno, Imperial, and Riverside Counties in 2021.

## Arbovirus Activity in Santa Barbara County

Last month, one dead bird from Santa Barbara County was tested for West Nile virus, and the results were negative. Two other birds were reported but not tested. Twenty-five mosquito pools from seven sites tested negative for WNV, SLE, and WEE.

The District currently maintains four sentinel chicken flocks in Santa Barbara County located at the Goleta Sanitary District, Mission Hills Community Services District, the Solvang City Wastewater Treatment Plant, and the U.S. Forest Service Fire Station in Carpinteria. Blood samples were taken the weeks of August 2, 16, (negative results) and 30 (results pending).

## Zika Virus and Invasive *Aedes* Mosquito Update

No *Aedes aegypti* mosquitoes were collected in Santa Barbara County in July.

There have been no Zika virus infections reported in California in 2021 to date.



Lado et al 2021, *Journal of Medical Entomology*

Male *Dermacentor variabilis* (left) occurs in the Western United States,  
Male *Dermacentor similis* (right) occurs in the eastern United States.

## New Species of American Dog Tick *Dermacentor similis*

Researchers at The Ohio State University have proposed that the American dog tick species should be split into two species: *Dermacentor variabilis* in eastern states and *Dermacentor similis* west of the Rocky Mountains. The team did genetic analysis of 143 ticks and found significant regional differences. They also found 20 subtle, but consistent, morphological differences.

The next step will be determining if the two species can carry the same pathogens and have the same competence to vector them. Currently, *D. variabilis* is known to vector Rocky Mountain spotted fever, tularemia, bovine anaplasmosis, Q fever, and Ehrlichiosis.