



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

DISEASE SURVEILLANCE REPORT

October 2022

Vector-borne Disease Surveillance

The District received several mosquito/biting complaints from the west end of Carpinteria.

Location	Date	# of Mosquitoes	Type of Trap	# of Traps	Mosquitoes per Trap Night	Pools Submitted	WSW Test Result
Crescent Ave., SB 93105	9/30-10/6	73	Gravid	2	6.1	4	Negative
Crescent Ave., SB 93105	10/4-10/5	2	EVS	9	0.2	0	NA
Chino St., SB 93101	9/15-10/6	1	BGS2	1	0.05	0	NA
Carpinteria Creek, CARP 93013	10/10-10/12	41	Gravid	1	20.5	1	Negative
Sta Monica Creek CARP	10/17-10/18	6**	EVS	2	3	0	NA
Carpinteria Salt Marsh	10/17-10/18	25	EVS	4	6.25	0	NA
Cravens Ln, CARP 93013	10/17-10/18	3	EVS	3	1	0	NA
Cravens Lane, 93013	10/18-10/19	142	EVS	8	17.75	2	Negative
Cravens Lane, 93013	10/17-10/19	34	Gravid	2	8.5	1	Negative
Andree Clark Bird Refuge, SB	10/20-10/21	11	EVS	6	1.8	0	NA
Andree Clark Bird Refuge, SB	10/20-10/21	16	Gravid	1	16	1	Pending
El Estero Water Treatment Plt, SB 93103	10/20-10/21	192	EVS	6	32	5	Pending
El Estero Water Treatment Plant, 93103	10/20-10/21	37	Gravid	1	37	0	NA
Evergreen Pk, GOL 93013	10/24-10/25	10	Gravid	1	10	2	Pending
Evergreen Park, 93013	10/24-10/25	97	EVS	6	16.2	0	NA
Lake Los Carneros, 93013	10/24-10/25	1	Gravid	1	1	0	NA
Lake Los Carneros, 93013	10/24-10/25	18*	EVS	6	3	0	NA
Olive Mill Road, Hot Springs fish ladder, 93108	10/21-10/24	7	Gravid	1	2.3	2	Pending
Goleta Sanitary District	10/25-10/28	18	Gravid	1	6	1	Pending
Willow Springs, Los Carneros Way, 93013	10/25-10/28	23	Gravid	1	7.7	1	Pending

BGS2=Biogents Sentinel 2

BGP=Biogents Pro

EVS=encephalitis surveillance trap (CO²)

WSW=West Nile virus, St. Louis Encephalitis virus, and Western Equine Encephalitis virus

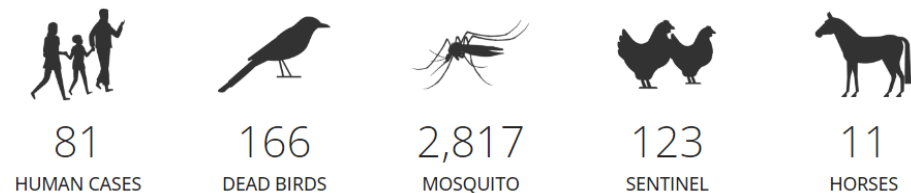
*250 no-see-um biting midges (*Culicoides*)

**6 salt marsh mosquitoes and 4 black flies (*Simuliidae*)

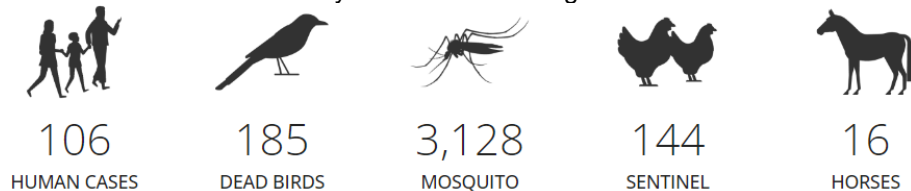
California Arbovirus Detection

In October, West Nile Virus activity slowed down. Throughout California, 311 WNV positive mosquito pools were reported for a 2022 total of 3,128 positive pools. One hundred and eighty-five dead birds have tested positive for WNV; at this time last year, there were 209. Out of the total of 116 human WNV cases, seven were fatal, and 10 were asymptomatic blood donors. One hundred and fifty-two mosquito pools from 10 counties tested positive for Saint Louis encephalitis virus in 2022; there have been nine human cases. No detections of Western equine encephalitis virus have been reported in California this year.

2022 West Nile Virus Activity in California through September



2022 West Nile Virus Activity in California through October



In October, one dead bird was reported in Santa Barbara County, but it was not in acceptable condition for testing. Eight mosquito pools from Santa Barbara County tested negative for encephalitis viruses.

Invasive *Aedes* Mosquito and Zika Virus Update

No *Aedes aegypti* mosquitoes or other invasive *Aedes* species have been detected in Santa Barbara County, thus far in 2022.

Aedes aegypti mosquitoes are present in 24 California counties. Last month Santa Cruz and Santa Clara Counties detected *Aedes aegypti* for the first time. *Aedes albopictus* is present in four counties. *Aedes notoscriptus* occurs in L.A., Orange and San Diego Counties. To date, 323 mosquito pools have tested negative for Zika, dengue, or chikungunya in California in 2022.



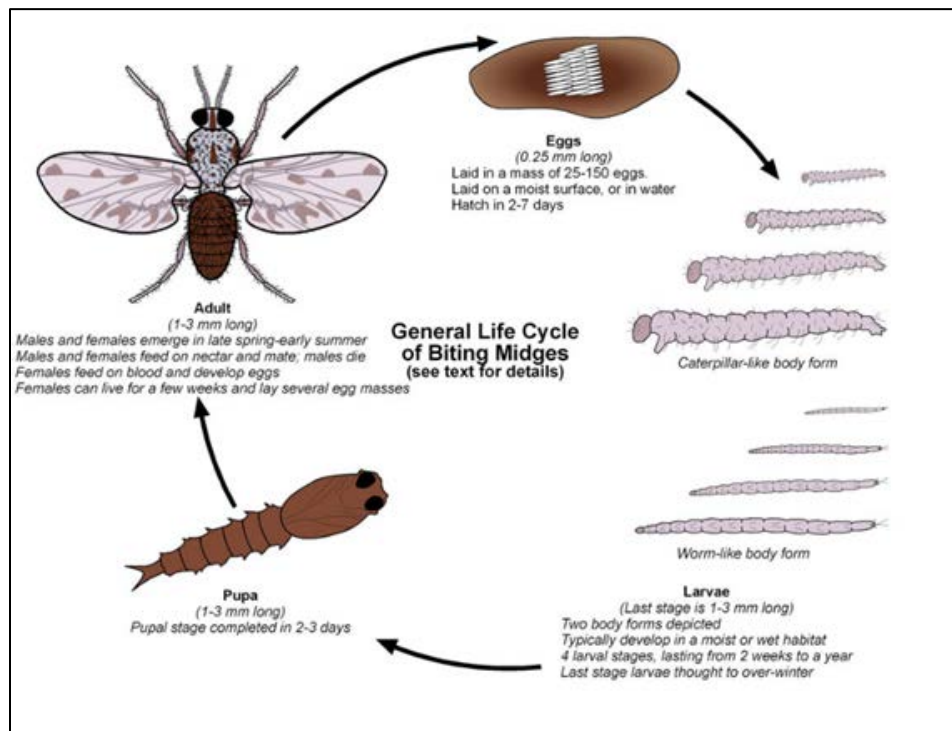
Photo Alan R Walker

No-see-ums *Culicoides*

Culicoides is a genus of about 1000 species of biting midges commonly called no-see-ums due to their small size (although, at 1-3mm, they are visible). Their spotted wings are their most obvious identifying feature.

Like mosquitoes, carbon dioxide attracts biting midges to the District's dry ice-baited traps. Many have been trapped at Lake Los Carneros recently. They have also been caught in our traps at UCSB, Paradise Road, Evergreen Park, Santa Monica Creek, and Lopez Lake (SLO County). The District has provided a graduate student at U.C. Riverside with samples for her research on black fly species diversity in California.

Female no-see-ums require a blood meal for egg development, while both males and females feed on flower nectar. The eggs are laid in moist soil; given the vast possible larval habitat, control by larvicide would be very challenging. *Culicoides* midges are vectors of the livestock disease bluetongue and of epizootic hemorrhagic disease (EHD), which affects deer. In Africa, Central America, and South America, their bites can infect humans with filarial worms.



Culicoides life cycle. Image from Purdue University