



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

May 2015

West Nile Virus Activity

No further West Nile Virus (WNV) activity has been detected in Santa Barbara County since a sample pool of mosquitoes collected at Lake Los Carneros, City of Goleta on April 1-2, 2015 tested positive for the disease. Throughout California, a total of 49 WNV positive dead birds have been collected in 8 counties along with 40 WNV positive mosquito pools from 6 counties.

Statistics for California WNV activity can be found online at www.westnile.ca.gov. National statistics for WNV can be found at the National Centers for Disease Control and Prevention website at www.cdc.gov.

Yellow Fever Mosquito Update

Yellow Fever Mosquitoes (*Aedes aegypti*) were found in the City of Hayward, Alameda County during May 2015. This is the 10th California county to detect *Ae. aegypti*, all since summer 2013.

Unidentified *Aedes* mosquito trapped in Solvang

A BG-Sentinel trap placed in Solvang by the District on May 11-12, 2015 picked up a very badly battered *Aedes* sp. mosquito. It was suspected to be a Western Treehole Mosquito (*Aedes sierrensis*) which is quite common in the Santa Ynez Valley. However, the mosquito was so badly mangled that *Ae. aegypti* could not be ruled out. Photographs were sent to the California Department of Public Health in Ontario, California, but still nobody could positively identify the specimen. CDPH recommended submitting the mosquito to Dr. Daibin Zhong at U.C. Irvine. Dr. Zhong performed a DNA test on the mosquito specimen and confirmed that it was *Ae. sierrensis* to everyone's relief.

Live Mosquito-Borne Virus Surveillance

The District conducted 11 mosquito trapping surveys in May 2015. The results are shown in the table below. No more sample pools have tested positive since a pool of 50 Encephalitis Mosquitoes (*Culex tarsalis*) collected at Lake Los Carneros, Goleta on April 1-2, 2015 tested positive for WNV.

LOCATION	DATE	NUMBER of MOSQUITOES	NUMBER of TRAPS	MOSQUITOES PER TRAP NIGHT*	POOLS SUBMITTED	RESULT
Andree Clark Bird Refuge, Santa Barbara	4/30-5/1/15	16	12	1.3	1	Negative
Chumash Park, Pismo Beach	5/4-5/15	199	3	66.3	2	Negative
Pismo Creek, Pismo Beach	5/4-5/15	55	4	13.8	0	N.A.
Leroy Park, Guadalupe	5/4-5/15	310	6	51.7	6	Negative
apartments, Bradley Rd., Orcutt	5/4-5/15	1	3	0.3	0	N.A.
Sage Hill Campground, upper S. Ynez Valley	5/11-12/15	202	4	50.5	3	Negative
Cachuma Village, Santa Ynez Valley	5/11-12/15	35	3	11.7	1	Negative
Fjord Dr., Solvang	5/11-12/15	121	6	20.2	2	Negative
Riverview Park, Buellton	5/11-12/15	12	4	3.0	0	N.A.
UCSB West Campus	5/18-19/15	13	11	1.2	0	N.A.
UCSB/Santa Barbara Airport Bluffs	5/27-28/15	254	12	21.2	5	Pending

*Mosquitoes Per Trap Night = Number of Mosquitoes ÷ (Number of Traps x 1 Night)

This surveillance technique utilizes battery-powered traps that use dry ice as a source of carbon dioxide to attract adult female mosquitoes that are actively seeking a blood meal. The live female mosquitoes are taken into the District's laboratory where they are anesthetized with triethylamine under the fume hood. They are then separated by species using a stereo zoom microscope and placed into "pools." The pools (1 pool = up to 50 adult female mosquitoes of a single species collected at one place at one time) are stored in the District's ultra-low temperature freezer at -70°C until they can be submitted to the U.C. Davis Center for Vector-Borne Diseases at Davis, California where they are analyzed for the presence of live mosquito-borne viruses including WNV.

West Nile Virus Dead Bird Submissions

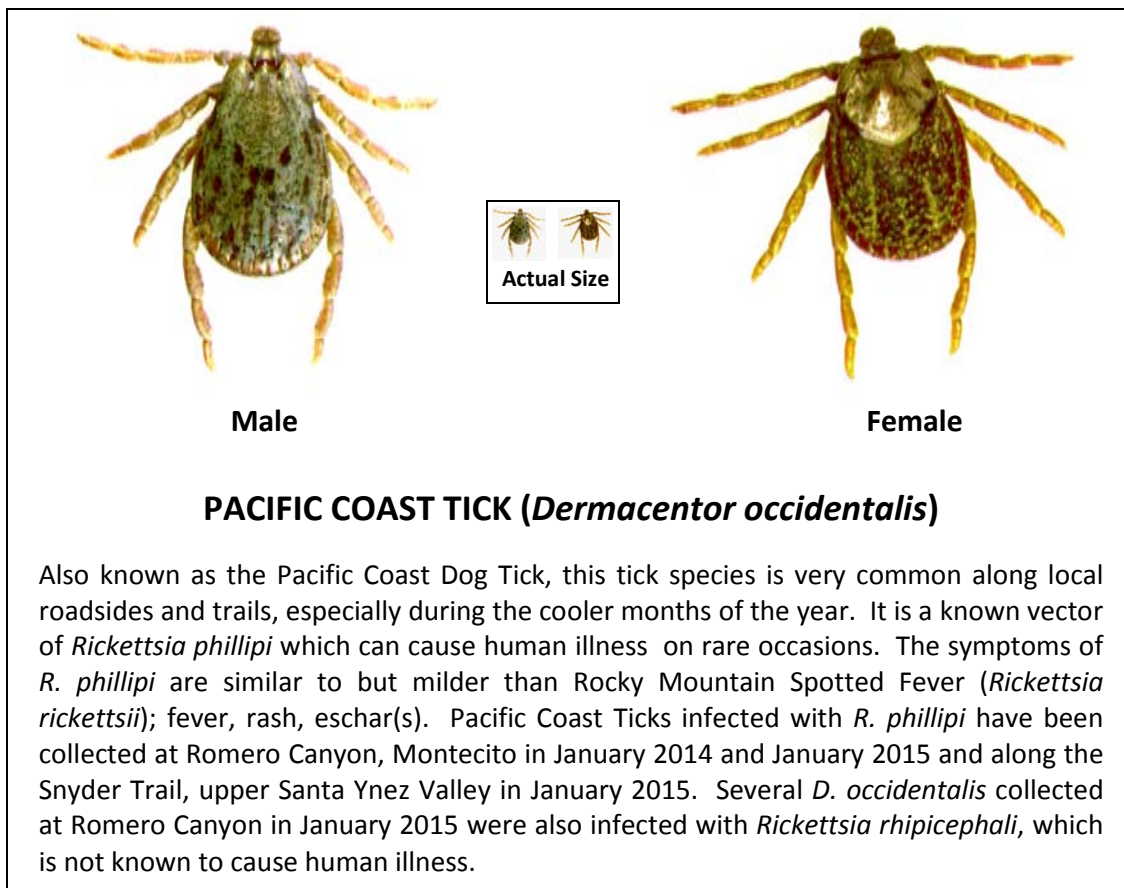
The District submitted one dead bird sample in May 2015. The bird, a Crow from Carpinteria, tested negative for WNV. All dead bird samples submitted in 2015 to date have been negative for WNV.

Citizens can report dead birds to the California Department of Public Health's toll free West Nile Virus Dead Bird Hotline (1-877-968-2473 or 1-877-WNV-BIRD) or online at www.westnile.ca.gov. Local agencies will pick up the dead birds and collect samples via oral swabs that are transferred to RNase cards. The RNase cards are dried outdoors for at least two hours then mailed to the U.C. Davis Center for Vector-Borne Diseases where the samples will be analyzed for West Nile Virus.

Sentinel Chicken Flocks

District personnel are obtaining blood samples from the District's 5 sentinel chicken flocks every two weeks. In 2015 to date all samples have tested negative for WNV and other mosquito-borne encephalitis viruses.

Samples of blood are collected from each chicken on strips of filter paper and dried overnight. They are then submitted to the California Department of Public Health Vector-Borne Disease Laboratory at Richmond, California where they are analyzed for antibodies to WNV and other mosquito-borne viruses.



PACIFIC COAST TICK (*Dermacentor occidentalis*)

Also known as the Pacific Coast Dog Tick, this tick species is very common along local roadsides and trails, especially during the cooler months of the year. It is a known vector of *Rickettsia phillipi* which can cause human illness on rare occasions. The symptoms of *R. phillipi* are similar to but milder than Rocky Mountain Spotted Fever (*Rickettsia rickettsii*); fever, rash, eschar(s). Pacific Coast Ticks infected with *R. phillipi* have been collected at Romero Canyon, Montecito in January 2014 and January 2015 and along the Snyder Trail, upper Santa Ynez Valley in January 2015. Several *D. occidentalis* collected at Romero Canyon in January 2015 were also infected with *Rickettsia rhipicephali*, which is not known to cause human illness.