



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

February 2014

West Nile Virus Activity

No West Nile Virus (WNV) activity has been detected in Santa Barbara County in 2014 to date. However, 3 dead birds and a sentinel chicken have already tested positive for the disease in other parts of California. The dead birds were all Crows collected in Santa Clara County. The sentinel chicken was from El Segundo, Los Angeles County and became infected sometime between bleedings on December 10, 2013 and January 2, 2014. These are some of the earliest detections of WNV on record in California.

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.

Sentinel Chicken Flocks

District personnel picked up 30 new chickens from Demler Egg Ranch in San Jacinto, California on January 9, 2014. Ten of these chickens replaced the two year old chickens at the Mission Hills Community Services District and another 10 replaced the two year old chickens at the Goleta Sanitary District. The old chickens were adopted by employees at the two host agencies. The last 10 of the new chickens will be used to re-establish the Paradise Road flock in March 2014. The chickens at Carpinteria and Solvang will serve for another season. The 2014 sentinel chicken bleeding season will begin the first week of April 2014.

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.

West Nile Virus Dead Bird Submissions

The District did not submit any dead bird samples in February 2014.

The California Department of Public Health's Dead Bird Hotline has been funded for 2014. Funding will come from an increase in MVCAC dues for all member agencies. The formula for the dues increase has not yet been determined as of this writing.

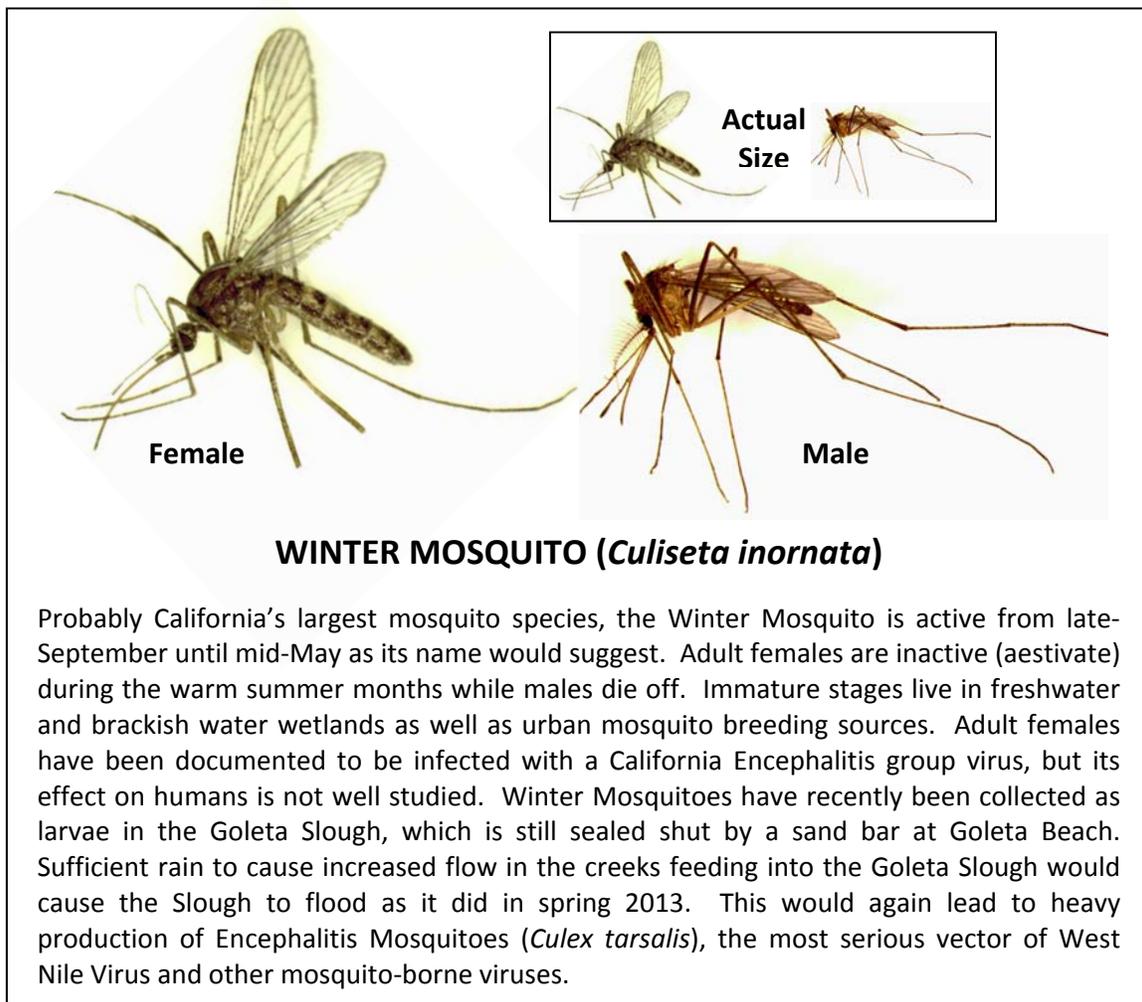
The dead bird submission protocol has changed as of September 1, 2013. The California Animal Health and Food Safety Laboratory will no longer accept dead bird carcasses. Citizens can still report dead birds to the California Department of Public Health's (DPH) toll free West Nile Virus Dead Bird Hotline (1-877-968-2473 or 1-877-WNV-BIRD) or online at www.westnile.ca.gov. However, only Corvids (Crows, Ravens, Jays, and Magpies) will be authorized for testing. 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.

Live Mosquito-Borne Virus Surveillance

Live Mosquito-Borne Virus Surveillance trapping will resume in March 2014.

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.



Probably California's largest mosquito species, the Winter Mosquito is active from late-September until mid-May as its name would suggest. Adult females are inactive (aestivate) during the warm summer months while males die off. Immature stages live in freshwater and brackish water wetlands as well as urban mosquito breeding sources. Adult females have been documented to be infected with a California Encephalitis group virus, but its effect on humans is not well studied. Winter Mosquitoes have recently been collected as larvae in the Goleta Slough, which is still sealed shut by a sand bar at Goleta Beach. Sufficient rain to cause increased flow in the creeks feeding into the Goleta Slough would cause the Slough to flood as it did in spring 2013. This would again lead to heavy production of Encephalitis Mosquitoes (*Culex tarsalis*), the most serious vector of West Nile Virus and other mosquito-borne viruses.