



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

November 2009

West Nile Virus Activity

Only very low levels of West Nile Virus (WNV) have been detected in Santa Barbara County in 2009 to date. A single dead bird found in the Santa Ynez Valley during late June 2009 tested positive for the disease (see below for details). Ventura County reports 3 WNV positive dead birds and San Luis Obispo County reports one. A total of 101 confirmed human cases of WNV (4 fatal) have been documented in 18 California counties in 2009 to date. Counties with the highest number of human cases are Los Angeles (20), Kern (18), Fresno (13), and Stanislaus (13).

Statistics for California WNV activity in 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

As of the end of November 2009, the District will switch to a once per month winter sampling schedule for its 4 active sentinel chicken flocks. The next sampling is scheduled for the first week of January 2010. All samples submitted to date have been negative for WNV and other mosquito-borne viruses. The District's Paradise Road flock has been inactivated for the winter. The chickens from that flock were adopted by Forest Service personnel. The flock will be re-activated in spring 2010.

The District has ordered its 2010 sentinel chickens from the MVCAC. However, due to a shortage of chickens in Southern California, it will be necessary for a District employee to travel to Turlock, Stanislaus County to pick up the chicken order.

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 California Animal Health and Food Safety Laboratory has suspended dead bird testing as of mid-October 2009. **Testing will resume in March 2010.** The California Department of Public Health Dead Bird Hotline will continue to take dead bird reports through the winter, but will not accept anymore for testing until March 2010. The District submitted only 4 dead birds in 2009. One dead bird, a Yellow-Billed Magpie collected on a ranch near Happy Canyon in the Santa Ynez Valley in late June 2009 did test positive for WNV. This has been the only indication of WNV activity in Santa Barbara County in 2009 to date. Due to the State of California's financial difficulties, the California Department of Public Health (DPH) was very selective about authorizing dead birds for testing. The District cannot submit dead birds for testing without the DPH's authorization.

The dead birds are submitted to the California Animal Health and Food Safety Laboratory at Davis, California to be analyzed for the presence of West Nile Virus. The District and other agencies submit dead birds that are found by citizens who report them 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.

Live Mosquito-Borne Virus Surveillance

A total of 271 mosquito pools were submitted to the laboratory at U.C. Davis in 2009. All tested negative for WNV and other mosquito-borne viruses.

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, separated by species, 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.

Mosquito Population Surveys

This project began in mid-March 2008 and continued in 2009. **Charts 1-5 illustrated on pages 3-5 summarize the mosquito population surveillance trapping results for the North County and Gaviota Coast for 2009.** Data is absent for some months due to the fact that trapping surveys were not conducted at all locations during every month. Efforts will be made to institute a more systematic schedule for trapping surveys for the 2010 season.

This mosquito trapping technique utilizes the same traps that are used for Live Mosquito-Borne Virus Surveillance. However fewer traps are placed at each location. The primary objective is to determine mosquito populations instead of collecting a large number of mosquitoes to test for the presence of disease. This is an effort to determine what mosquito species are active, how many, and at what time of year they are active. A number of locations will be sampled repeatedly throughout the spring, summer, and early fall seasons. Emphasis will be placed on North County locations that have not been routinely surveyed in past years.

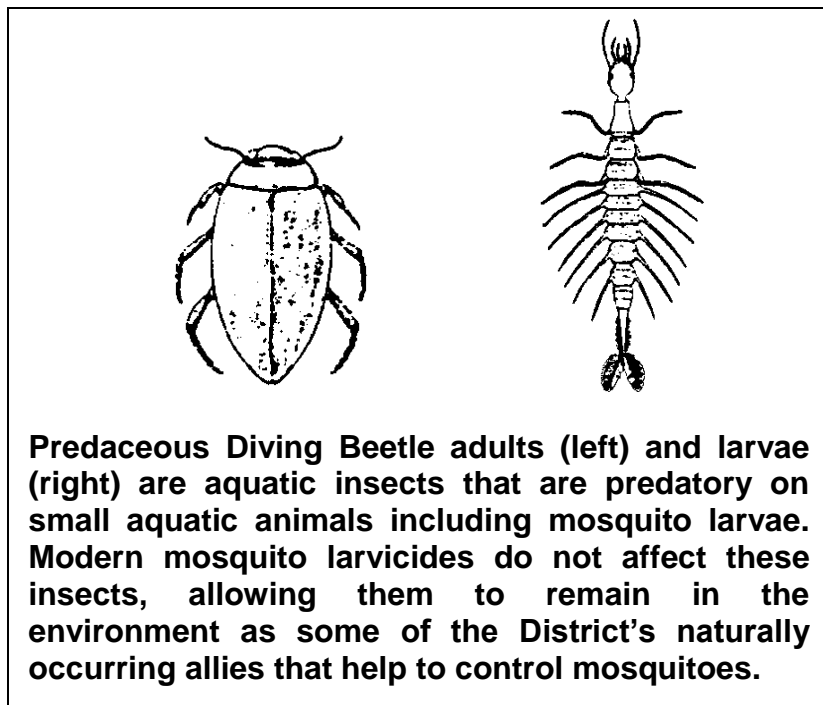


Chart 1.
Santa Ynez Valley Rural Mosquito Trapping Locations.

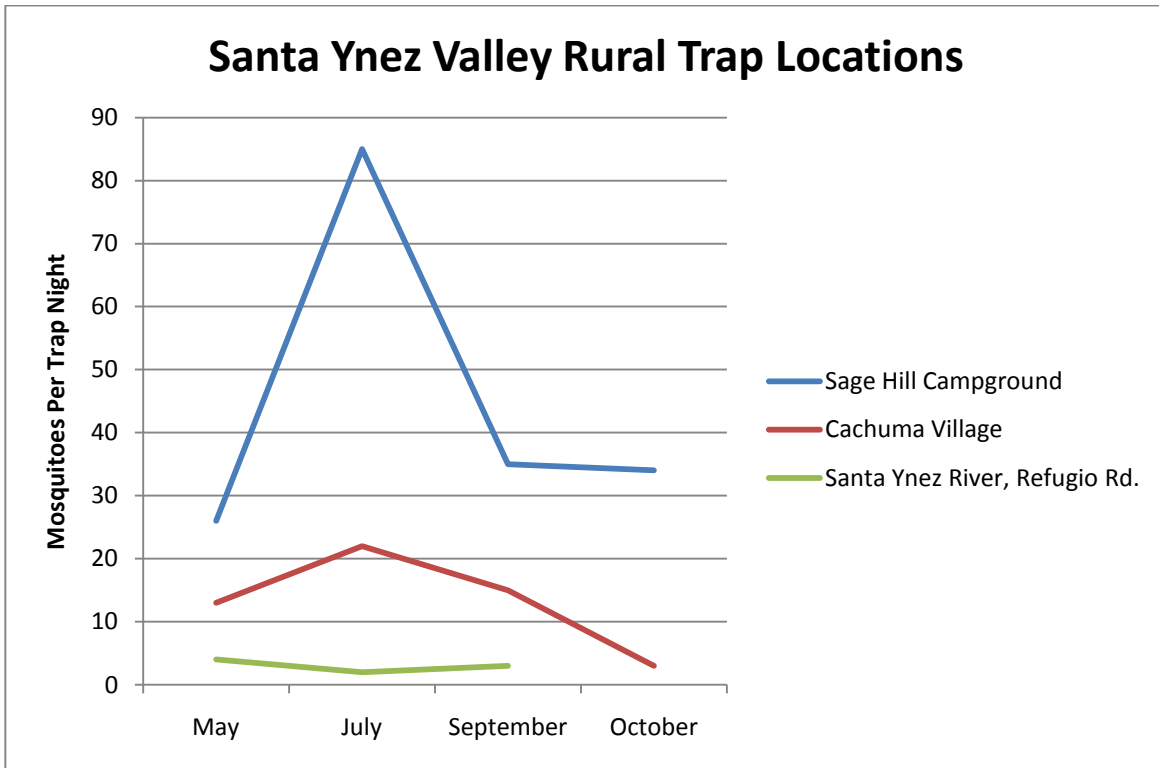


Chart 2.
Santa Ynez Valley Suburban Mosquito Trapping Locations.

NOTE: Sage Hill Campground, Paradise Road is included for comparison purposes.

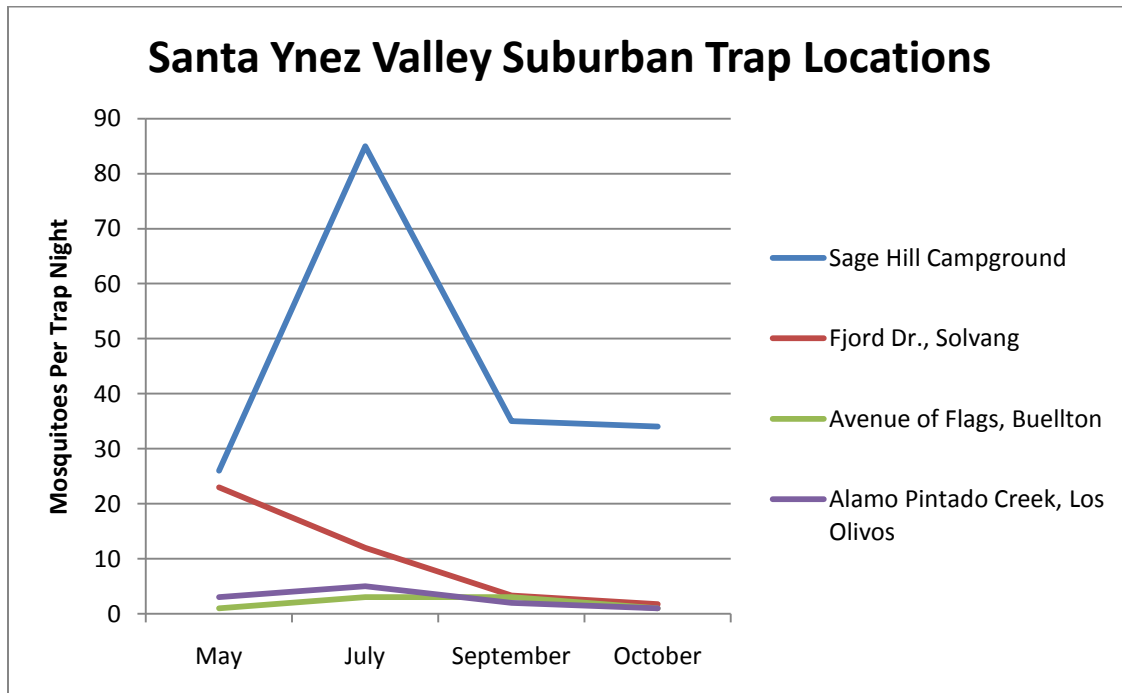


Chart 3.
Lompoc Valley Mosquito Trapping Locations.

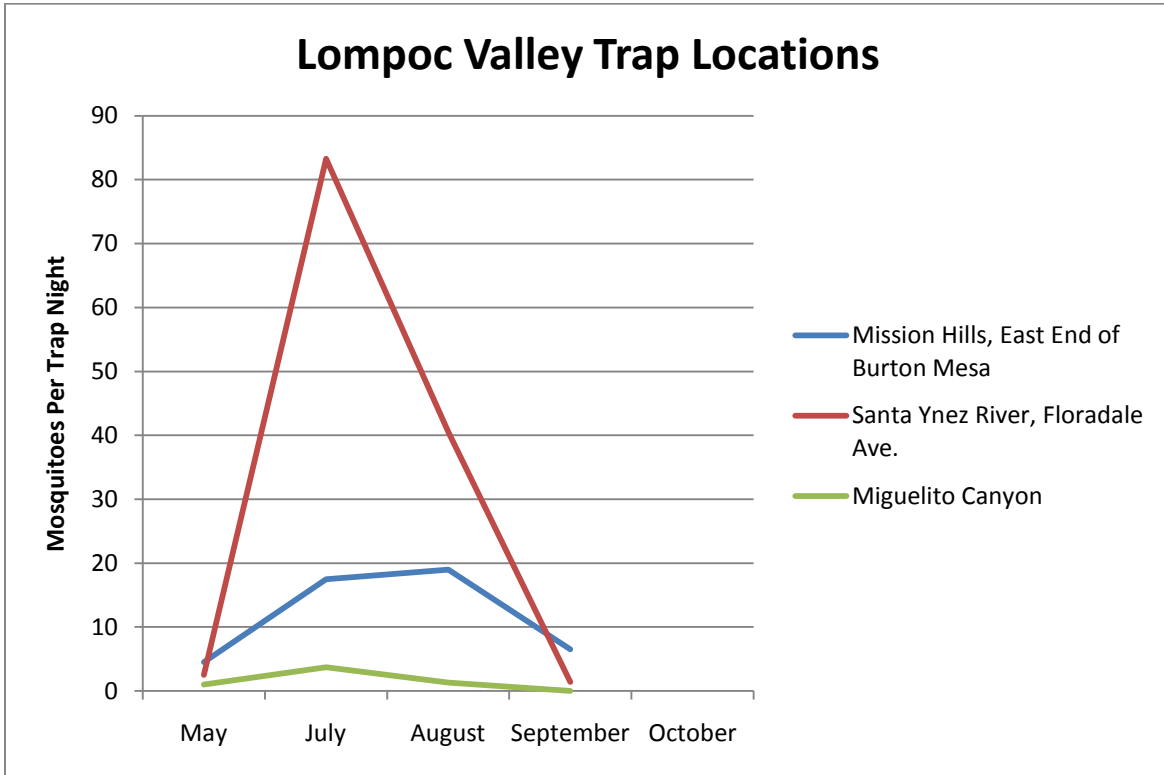


Chart 4.
Santa Maria Valley Mosquito Trapping Locations.

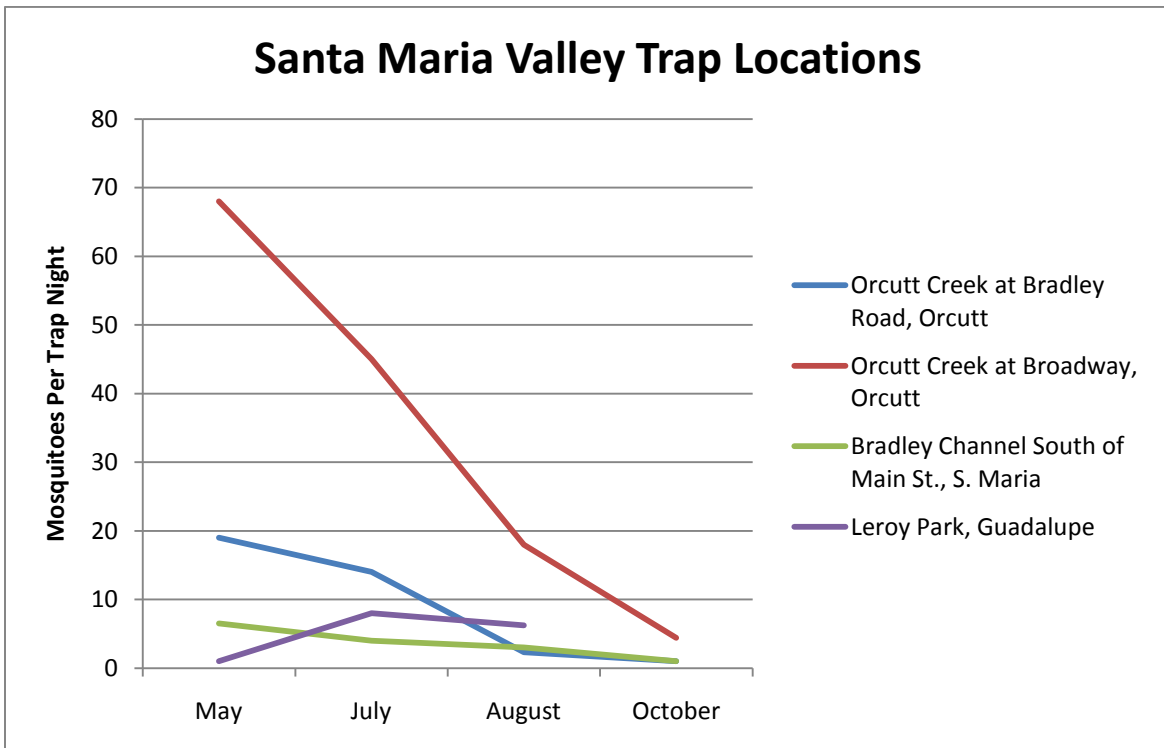


Chart 5.
Gaviota Coast Mosquito Trapping Locations.

NOTE: Sage Hill Campground, Paradise Road is included for comparison purposes.

