

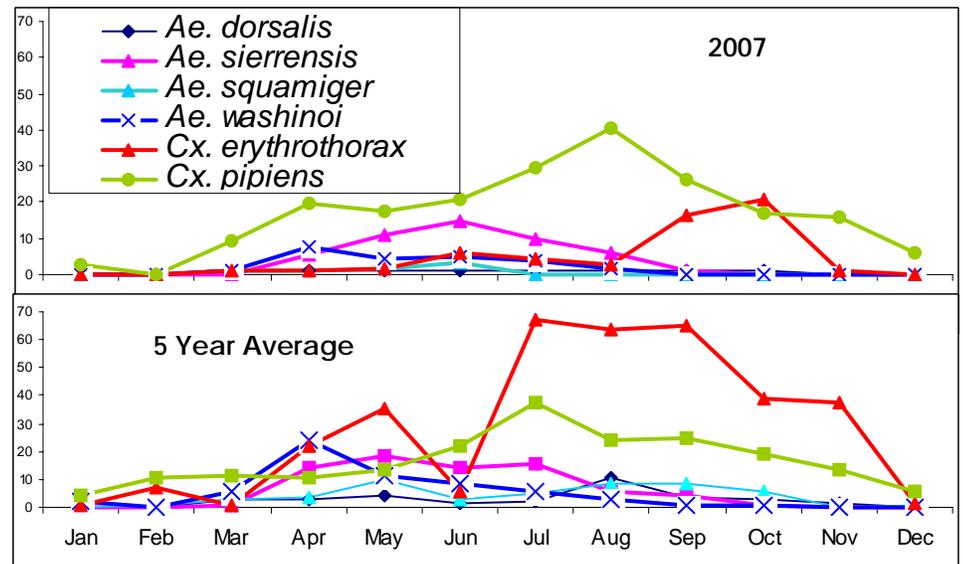


Entomology Report



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Adult Mosquito Populations in CO2 Traps



The graphs above summarize adult mosquito collections for the past year. *Culex erythrothorax* populations were much lower than the 5 year average. This was due to helicopter treatments at Searsville, Mills Field and Sharp Park, which have effectively curtailed mosquito production at these sites. Summer and winter salt marsh mosquitoes (*Aedes dorsalis* and *Ae. squamiger*) also remained low due to low rainfall and effective early treatment of salt marshes. *Culex pipiens* populations were somewhat higher, starting earlier and peaking later.

Mosquito Control Operations

Mosquito production was relatively low during November and December due to low temperatures and the absence of significant rainfall. The first heavy winter storms of the year began on January 4th. These storms have dropped enough water to create mosquito sources on Bair Island and marshes throughout the Peninsula. Technicians are regularly inspecting these impounds and expect to begin treatment within the next few weeks. Limited treatment was conducted on foot on outer Bair Island at the end of December. Helicopter applications could be required at least once this winter. Winter rains have flushed out the storm drain systems and creeks, but control work has continued in fishponds and other backyard sources. New mosquito sources have been discovered under houses in the problem areas of San Mateo, San Bruno and South San Francisco.



Mosquito production under a home in South San Francisco



Removal of Siphon Pipes from Bair Island

The District has volunteered to remove a number of large plastic pipes from middle and outer Bair Island as its contribution to restoration efforts. The pipes were installed in the 1970's by the Mobil Oil Corporation when the property was slated for a housing development. Bair Island was once a collection of salt evaporation ponds, each one surrounded by dikes. The ponds were drained in the 1950's when salt production ceased and the property was sold. The siphon pipes were designed to remove rainwater that collected behind the dikes to keep the area dry until the housing development could be started. The pipes range in diameter from 8 to 12 inches and run up to 150 feet into the bottom of Smith and Cork-screw Sloughs. Removal began on January 6 and has involved cutting the pipes into manageable lengths and pulling them up out of the sediment with pulleys, ropes, and brute strength. The pipes will be sliced lengthwise and carried to shore in a small skiff. The project is expected to be completed by the end of January.



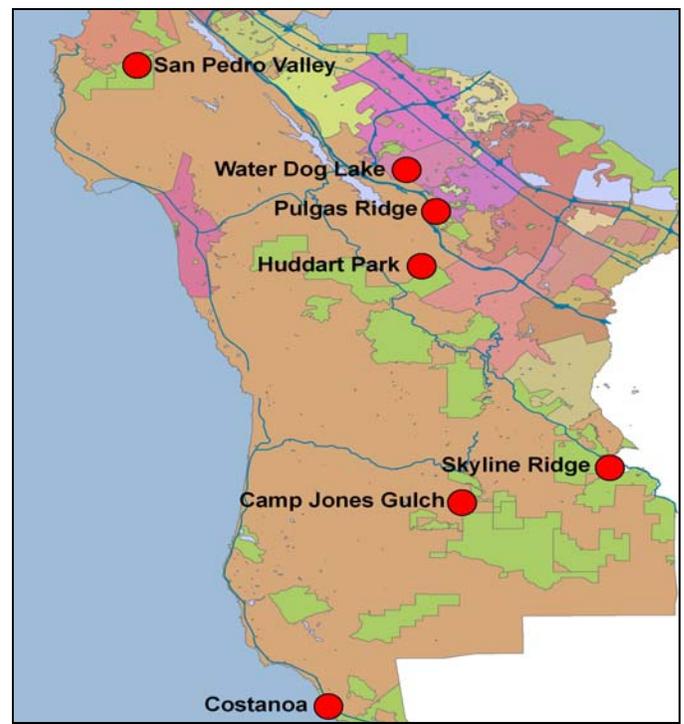
Tick Surveillance

This year, the lab will be measuring relative density and seasonal distribution of western black-legged ticks at five parks: Costanoa Lodge, Huddart Park, Skyline Ridge Open Space, Pulgas Ridge Open Space, and San Pedro Valley County Park. These parks represent the varied climates of the north, south, mid-, and coastal areas of the county. The study is designed to look at differences in the timing of tick activity in different parts of the county.

Additional testing for Lyme disease spirochetes will be conducted on ticks from Water Dog Lake and Camp Jones Gulch.



Female western black-legged tick on flag



Location of Parks to be surveyed this year



Program Education Day

On December 11, the District welcomed trustees and guests for the 2007 Program Education Day and luncheon. Program Education Day is an annual event at which Trustees, City Council members, and other invited guests receive information about District programs, and a preview of the upcoming year's activities. This year, Mosquito Control Technicians met with individual trustees and presented detailed information on control work in their cities. Trustees and staff alike enjoyed the opportunity to ask and answer questions about their zones, in a casual, one-on-one setting.



Lab displays set up for early arrivals



Technician Stan Kamiya, with Trustee Robert Blake and guests



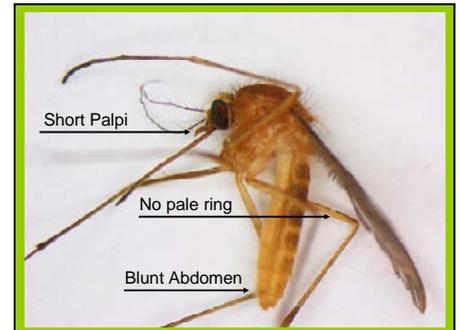
Technician Ben Rusmisl, with June and Robert Bury, Trustee

Continuing Education Workshop

Staff from Coastal Region mosquito and vector control districts attended continuing education workshops at the Alameda Naval Air Station on December 4th and 6th, 2007.

A variety of topics in vector control were covered, including detailed information on bacterial pesticides (*Bacillus thuringiensis* and *B. sphaericus*) and an update on the spread of the Red Imported Fire Ant in California.

Two of the featured presentations were given by San Mateo County District Staff. Assistant Vector Ecologist Lauren Marcus gave an engaging talk on *Culex erythrothorax* Biology and Ecology, and Mosquito Control Technician Kim Keyser presented her research on the invasive *Polistes dominulus*, the European Paper Wasp.



Lauren Marcus presented new insights on the biology and ecology of *Culex erythrothorax*

Raccoon Roundworm Project



Raccoon latrine, potential source of raccoon roundworm eggs

District staff have begun a survey to determine the extent of exposure to raccoon roundworms by local residents. Mosquito Control Technician Stephanie Cavanaugh is looking at the number and location of raccoon latrines on residential property in South San Francisco, San Bruno and other cities. In 2005, a local pet dog died from encephalitis caused by raccoon roundworm. The survey is intended to assess whether humans in the county may also run the risk of exposure to this parasite.



"An Independent Special District
Working for You Since 1916"

SAN MATEO COUNTY
MOSQUITO ABATEMENT DISTRICT

1351 Rollins Road
Burlingame, CA 94010

Phone: 650-344-8592

Fax: 650-344-3843

www.smcmad.org

The San Mateo County Mosquito Abatement District is an independent, Special District funded by a property tax voted in by individual cities. Our mission is to safeguard the health and comfort of our citizens through a planned program to reduce mosquitoes and other vectors in an environmentally responsible manner.

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"A VECTOR is any animal that can transmit disease to animals or people."

San Francisco State University Photojournalism Project

In November and December, the District hosted Kimihiro Hoshino, a photojournalism student from San Francisco State University. Kimihiro spent three days shadowing lab and field personnel in their daily tasks, from office work to tick flagging in county parks and residential source inspections. The final result was a documentary on District operations in words and pictures.

Included below are some of Kimihiro's photographs.

