San Mateo County Mosquito Abatement District

February 2007

Entomology Report

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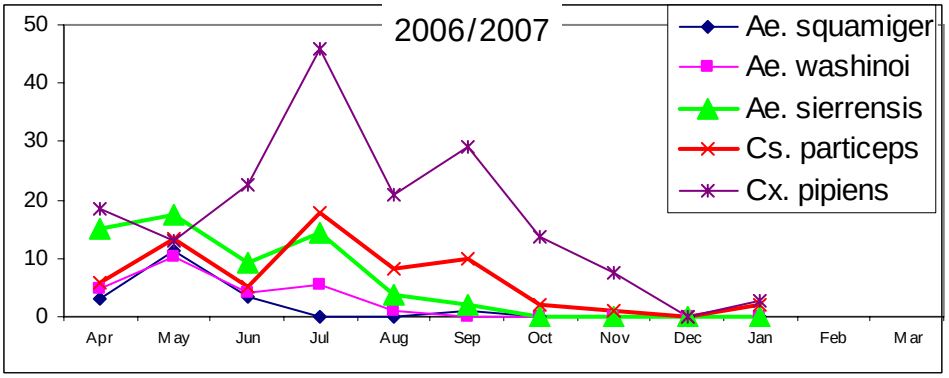
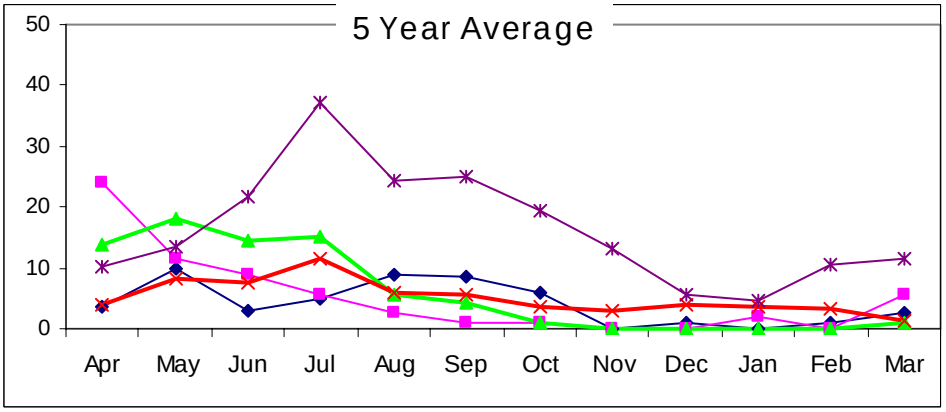
Adult Mosquito Populations in CO2 Traps





Mosquito Control Operations

In February, mosquito control technicians treated 992 backyard fishponds, 61 neglected swimming pools, 39 ditches and drain-lines, and 160 marshes and impounds (equaling a total of 43 acres). In comparison, last year 253 acres needed treatment. Water levels throughout the county are lower than usual for this time of year and the acreage needing treatment has been low county wide.

Spot inspections of catch basins were carried out at the beginning of March and no mosquito larvae were present. However, the low rainfall and warm weather will probably stimulate development of mosquitoes in these sources earlier than usual. District staff are preparing for early treatment of storm drains, vaults and sewer plants within the next month.

Bair Island:

Water levels at Bair Island are lower than usual for this time of year. The water in Middle Bair is confined to the ancient cracks that developed when the area was dewatered 20 years ago. Although the cracks do not contain vegetation (other than algae), they create an area sheltered from wind and hence, foster mosquito larvae. In most years, these ponds are covered with a shallow layer of rainwater by January and have extensive larval populations which must be treated by helicopter. Bair Island was inspected weekly in January and February. Small areas were found to harbor mosquitoes and were treated by hand on January 31 and February 27th. No helicopter treatments have been needed.

Cracked ground on Middle Bair

Sampling for mosquitoes in cracks

A 6-Year Analysis of Tick Surveillance in San Mateo County:

An analysis of tick surveillance data from 2002 through February 2007 in San Mateo County was performed. Adult *Ixodes pacificus* ticks have been collected from 11 parks. Thus far Lyme disease spirochetes have been detected in ticks from 8 parks (Big Canyon Park, Crystal Springs Trail, Edgewood Park, Huddart Park, Laurelwood Park, Los Trancos Woods, Pulgas Ridge, and San Pedro Valley Park). The prevalence of infection in ticks at these parks ranged from 0.5% - 3.3%. Ticks collected from Costanoa, Sweeney Ridge, and Water Dog Lake have not yet tested positive for Lyme Disease spirochetes.

% Infection of *I. pacificus* in San Mateo County Parks

Location	# *Ix. pacificus* Tested	% Infection
Pulgas Ridge	60	3.3
Los Trancos Woods	733	2.5
Huddart Park	140	2.1
Big Canyon Park	507	1.8
Crystal Springs Trail	556	1.6
San Pedro Valley Park	333	0.9
Laurelwood Park	428	0.7
Edgewood Park	195	0.5

of *I. pacificus* tested in San Mateo County Parks with no Lyme Disease

Location	# *I. pacifcus Tested*
Costanoa	58
Sweeney Ridge	32
Water Dog Lake	220

Other Activities:

Laptop Training Completions

District staff completed the transition to the use of individual laptop computers for data entry on mosquito breeding sources this month. The new system allows technicians to enter and retrieve data on their sources in the field. The District has used a computerized database for tracking inspections and treatment for about 10 years. However, now the data will be entered directly into the system by the technicians. The new system allows technicians to search for historical information on individual sources while in the field. Newer methods for storing information in databases has radically improved the standardization and accessibility of data. By February 2007, all mosquito control technicians have been trained to use this technology. Real-time access to data in the field is key to the future of mosquito control.

Website Promotion

Following the release of the new comprehensive website, public education materials have been created to promote this informational tool. A pamphlet and door hanger inform the public about the website, the type of information available, and an overview on how to navigate it. This has already proven effective as many residents have contacted the District with specific questions after accessing the website.

Public Relations Planning:

Northern California Vector Control District Public Information Officers Meeting

Laboratory staff attended a meeting in Sacramento with other Northern California mosquito and vector control districts to discuss media relations issues for the 2007 mosquito season. Representatives from the California Department of Public Health and the MVCAC were also in attendance. Coordination between districts in overlapping media markets was discussed. Ideas were also shared on advertising and outreach efforts , including a discussion of potential future public education collaborations between agencies.

Upcoming Events

Event	Date
San Francisco Home and Garden Show	March 21-25
American Mosquito Control Association Conference	April 1-7
Cleanup at Ryder Park	April 17-22
Earth Day Celebration at the San Francisco Zoo	April 22-23
Mosquito and West Nile Virus Awareness Week	April 23-29

We're on the web!
www.smcmad.org

"An Independent Special District Working for You Since 1916"

SAN MATEO COUNTY
MOSQUITO ABATEMENT DISTRICT

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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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Robert B. Gay, Manager	12
Chindi A. Peavey, Vector Ecologist	32
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Angie Nakano, Assistant Vector Ecologist	44
Lauren Marcus, Assistant Vector Ecologist	38
James Counts, Supervisor	16
Karen Williams, Finance Administrator	11

"A VECTOR is any animal capable of causing disease or is a public health nuisance."

Entomology lab learns techniques and engages in information exchange in Southern CA

Members of the entomology lab traveled to four districts in Southern California to learn new techniques and observe variations in equipment used at different districts. At the Greater Los Angeles VCD, treatment of underground storm drains was demonstrated, along with the technique for monitoring and obtaining blood samples from wild birds. They also demonstrated their "bug-mobile", a full-sized mobile home converted into a public education tool for children. Staff at Orange County MVCD highlighted modifications to their catch basin vehicles, the use of immunohistochemistry for detecting WNV, and modifications of traps. At San Gabriel Valley MVCD, District staff learned how to carry out the ELISA test, used to detect WNV, Western Equine Encephalitis and St. Louis Encephalitis in sentinel chickens. This test has other uses in disease surveillance that can be applied at the District. At Santa Barbara County VCD, rodent exclusion and control techniques were demonstrated and the staff discussed their approach to mosquito control and the biology of local species. All in all, a lot of knowledge was gained in the first-hand exchange of information and ideas with other districts.

Angela Brisco (Vector Ecologist, SGVMVCD) demonstrating ELISA test

Lauren Marcus, Angela Rory, Minoo Madon (Sci.Tech.Serv.Dir.,GIACVCD) inside the bug mobile