

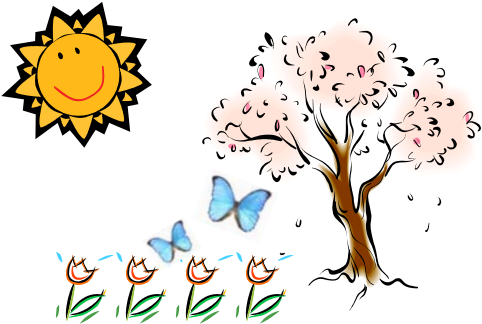
March 2007

Entomology Report

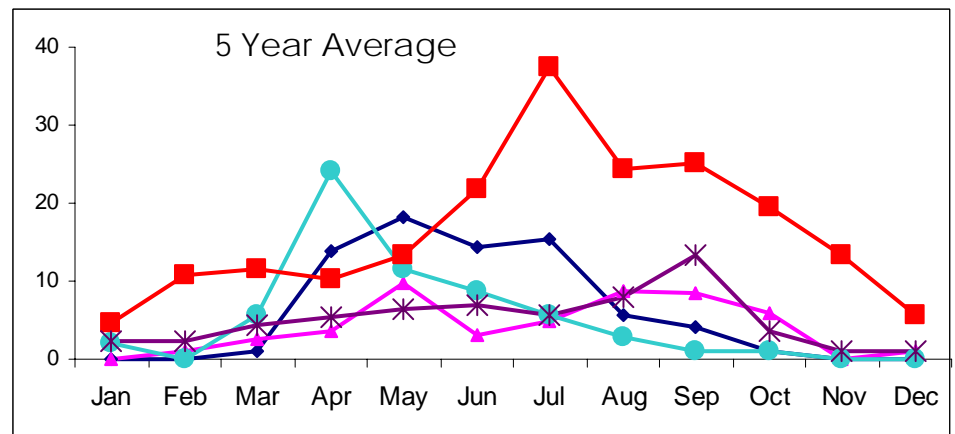
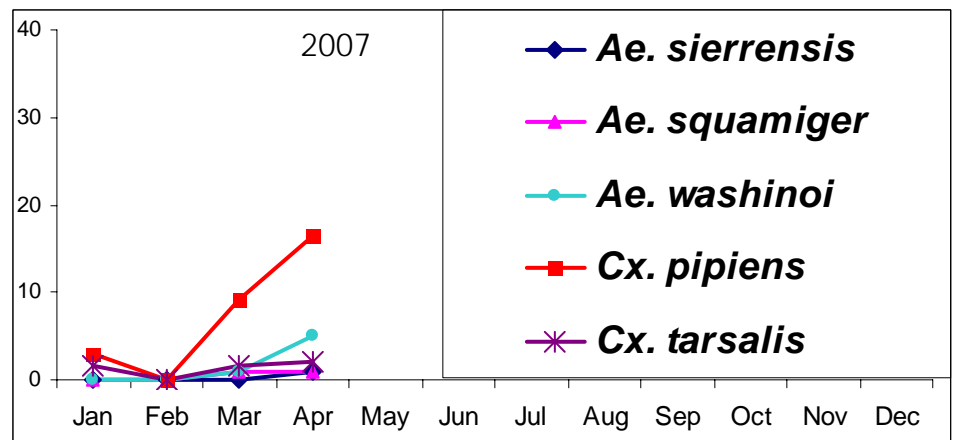


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Adult Mosquito Populations in CO2 Traps



Analysis of Mosquito Population Data

Culex pipiens was the most abundant adult mosquito in CO₂ traps in March and appeared in higher numbers than the 5 year average for this time of year (see above graphs). *Aedes washinoi* adults are usually the most prominent mosquito in traps during March, April and May. So far this year, the number of *Ae. washinoi* adults has remained low. Low rainfall in 2007 has resulted in fewer acres of seasonal impounds. This, combined with mosquito control in Mills Field, Jasper Ridge, Mussel Rock and Mori Point, has kept *Ae. washinoi* adults from emerging. Likewise, the number of adult winter salt marsh mosquitoes (*Ae. squamiger*) is thus far very low (less than 1 per trap night).

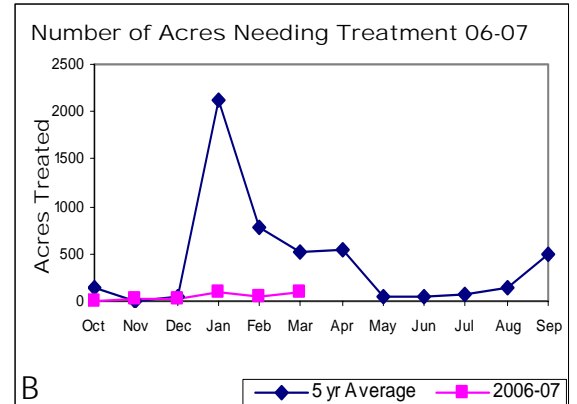
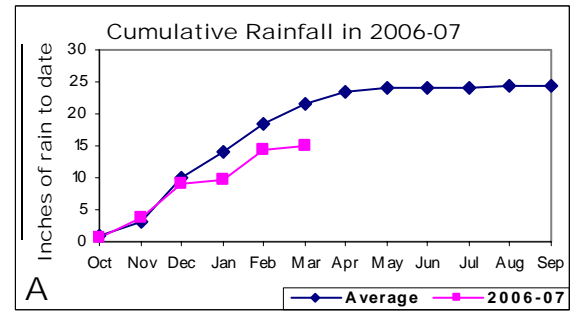


Mosquito Control Operations

In March, mosquito control technicians treated **10,062** catch basins, **1,064** ponds, **97** ditches and culverts, **54** swimming pools, water under **42** buildings, **37** vaults and **100** acres of marshes and impounds.

Rainfall in San Mateo County has been lower than usual this year (Figure A), causing a change in the number and types of sources needing treatment for mosquitoes. In particular, there have been fewer acres of impounded water needing treatment (100 acres this month compared with the average of 516 acres per month in previous years; Figure B). As a result, no helicopter applications were needed this year on Bair Island. Instead, the limited area needing treatment was treated on foot with backpack sprayers and hand application of granules.

Low rainfall has also meant that catch basins began producing mosquitoes earlier than usual this year; treatment began in March rather than May. Two summer hires have begun treating basins, along with permanent staff; a total of 10,062 basins were treated this month. In previous years, the average number of basins treated in March was 1,380.



Survey of San Mateo County Physicians on Lyme Disease

A pilot survey was performed to determine attitudes and beliefs of physicians in San Mateo County on the acquisition of Lyme Disease in the county, treatment options, and the possibilities of co-infections. Training was provided by the San Mateo County Public Health Department on survey completion and the pilot was performed with local infectious disease doctors. The questionnaire is now in the process of redesign to accommodate the needs of doctors for the full survey.

Midge Surveillance

Warm weather at the beginning of March this year raised concerns over potential early emergence of mosquitoes and other insects. In anticipation of Chironomid midge issues in the bay side of the county, a preliminary inspection was conducted on March 12 in targeted areas of San Mateo and Redwood Shores. District staff assessed the current midge breeding situation with visual inspections and salinity measurements. Midge larvae were present in only one site (near the South Bayside System Authority facility in Redwood Shores) and their density was low. All other sites appeared to have salinity levels too high to support development of midge larvae.



Chironomid midge larvae

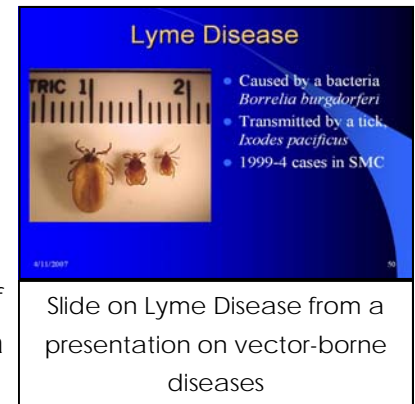
Monitoring of salinity in known midge-breeding sites will be ongoing throughout the spring.



Public Education and Other Activities

Lyme Disease and Ticks:

- Dr. Chindi Peavey, the District Vector Ecologist, gave a presentation on Lyme Disease Ecology and Surveillance at El Camino Hospital on March 17 in conjunction with Dr. Anne Kjemtrup, from the California Department of Health Services, and Victor Romano, from Santa Clara County Vector Control.
- Laboratory staff distributed a press release on the presence of vector ticks in vacant lots in a well-developed residential area in Pacifica. This story was picked up and published in an article by the Pacifica Tribune. The article has generated a number of calls from residents on the coast. Laboratory staff visited additional sites and spoke with residents about ways to reduce the risk of acquiring Lyme Disease.
- Legislation declaring May as Lyme Disease Awareness Month is currently going through the state legislature.



Mosquitoes and West Nile Virus:

- A display on District services and vector-borne diseases was installed at the Brisbane Library.
- Laboratory staff gave 5 presentations on vector-borne diseases at Carlmont High School.
- Laboratory and operational staff, in conjunction with San Francisco Public Health and Alameda County Mosquito Abatement District, participated in an educational booth at the San Francisco Flower and Garden Show.
- The District will run a half-page ad in the San Mateo Daily Journal about District services. It will be published the week prior to Earth Day and Mosquito and West Nile Virus Awareness Week.

Upcoming 2007 Earth Day Events:

- District staff will assist the city of San Mateo in removing debris from mudflats at the mouth of San Mateo Creek. The hovercraft and Argos will be used to pull shopping carts and tires from the mud.
- District staff will have an educational booth at the Earth Day Celebration at San Francisco Zoo.

Meetings and Conferences:

- Laboratory staff attended the Lyme disease Advisory Committee Meeting in Sacramento.
- Technicians and laboratory staff attended an educational meeting, hosted by Univar, discussing pesticide application and use, green ecology, and bed bugs.
- Dr. Peavey attended the American Mosquito Control Association Conference in Florida, where advances in mosquito control and prevention were discussed.

Public education is a key component in controlling vectors and reducing the risk of vector-borne diseases. Continuing education of district staff ensures that the District is not only up to date with current literature, products, and techniques, but that we remain on the cutting edge of mosquito control.



"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."

West Nile Virus Update

To date in 2007, 37 dead birds and squirrels have been reported, 26 of these have been tested and no dead birds or squirrels have tested positive for WNV in San Mateo County. A flock of ten chickens was picked up by district staff in Turlock and taken to their flock site at Searsville Lake for WNV surveillance. Preliminary bleeding will be performed in April and regular bleeding of chickens will commence in May.



Sentinel Chicken

Fair Display Remodeling

A dramatic redesign of signage and fair displays has begun! The dramatic makeover and use of more durable materials will provide a cohesive feel to the public education materials displayed at events across the county. Below are samples of the new materials:

