

# Butte County Mosquito & Vector Control District

Since 1948

2<sup>nd</sup> Quarter, 2023

Newsletter

## 2023 MOSQUITO SURVEILLANCE

The 2023 mosquito control season is now fully underway. The District has already seen increasingly higher numbers of mosquitoes in traps with rising populations identified in all areas of Butte County. The entomology department continues searching for West Nile virus and other mosquito-borne illnesses, utilizing New Jersey light traps, gravid traps, CO<sub>2</sub> baited traps, sentinel chickens, mosquito pools, and dead birds. An invasive species, *Aedes aegypti*, has been identified for the 4<sup>th</sup> year in a row within Butte County. *Aedes aegypti* is the primary vector of diseases such as Yellow Fever, Dengue and Zika viruses. We currently do not have any of these viruses. The District's control and surveillance programs are fully staffed and operating at high capacity. Mosquito and Vector Control Specialists are focusing larvicide efforts on various mosquito-breeding sources:

- Urban**  
Storm Drains, Catch Basins, Swimming Pools, Containers, Tires, Gutters, Storm Water Channels, Etc.
- Rural**  
Roadside Ditches, Pastures, Sewer Ponds, Sumps, Canal Leakage, Containers, Tires, Tree-Holes, Etc.
- Agricultural**  
Rice, Wetlands, Orchard Runoff, Ditches, Pump Leaks, Containers, Tires, Wildlife Area Ponds, Etc.



Identifying Mosquitoes

Catch Basin Treatments

Cougar ULV Sprayer

## 2023 WEST NILE VIRUS ACTIVITY

Year	Human Cases	Horse Cases	Deceased Birds	Deceased Squirrels	Mosquito Pools	Sentinel Chickens
2020	4	1	4	0	31	23
2021	12	0	2	0	80	26
2022	3	0	2	0	39	27
2023	0	0	0	0	0	0

As of June 28<sup>th</sup>, 2023, none of our sampling techniques have shown positive for West Nile virus (WNV). WNV has not been detected in Butte County.

## AERIAL OPERATIONS

March-June	Rice	Wetlands	ULV Adulicide	Totals
Acres Treated	14,614	3,123	30,720	48,457
Average Treated per Day	120	26	252	397

As of June 28<sup>th</sup>, 2022, aerial operations has treated 14,614 acres of rice and 3,123 acres of wetlands. There have been 4 late night aerial adulticide treatments, treating 30,720 acres, year to date.



Aircraft N6633K-JAWS



Oroville, CA. 95965  
5117 Larkin Road

Butte County Mosquito and Vector Control District

<b>MOSQUITOFISH</b> Requested By Phone or Website (530) 533-6038 www.ButteMosquito.com Free mosquitofish are available at the following locations	
<b>Oroville</b> BCMVCD Headquarters 5117 Larkin Rd. (530) 533-6038 Ace Hardware 1845 Mitchell Ave. (530) 533-5600	<b>Chico</b> BCMVCD Substation 444 Otterson Dr. (530) 533-6038 C Bar D Feeds 3388 State Hwy 32 (530) 342-5361
<b>Gridley</b> Ace Hardware 1626 State Hwy 99 (530) 846-3625	<b>Magnolia Gift &amp; Garden</b> 1367 East Ave. (530) 894-5410
<b>Concow</b> The Pine's Yankee Hill 11300 Miller Flat Rd. (530) 534-1265	<b>Wilbur's Feed</b> 139 Meyers St. (530) 895-0559
<b>Butte Valley</b> Earthworm Soil Factory 2552 Clark Rd. (530) 895-9676	<b>Paradise</b> Deja Vu Gardens 5424 Foster Rd. (530) 877-7341
<b>Hamilton City</b> Fire Department 4120 1 <sup>st</sup> St. (530) 826-3355	<b>Foothill Mill &amp; Lumber</b> 1698 Wagstaff Rd. (530) 877-3395

**MISSION STATEMENT**  
The mission of the Butte County Mosquito and Vector Control District is primarily to suppress mosquito-transmitted disease and also to reduce the annoyance levels of mosquitoes and diseases associated with ticks, fleas and other vectors through environmentally compatible control practices and public education.

**CONTACT INFORMATION**  
Butte County Mosquito & Vector Control District  
5117 Larkin Road, Oroville, CA. 95965  
Phone: (530) 533-6038, (530) 342-7350  
Fax: (530) 534-9916  
www.buttemosquito.com  
"FIGHT THE BITE!"



## MOSQUITO LIFE CYCLE

### There are more than 3,500 species of mosquitoes around the world

In California, we have about 50 species and of those, only a few are considered public health threats due to their potential to transmit mosquito-borne diseases to humans. People who have been bitten by a mosquito infected with viruses such as West Nile, Saint Louis Encephalitis, Dengue, and Zika may develop life-threatening or life-altering diseases. For the District and residents of Butte County to effectively reduce mosquito populations and the chance of getting a mosquito-borne disease, it is important to understand the habits and behaviors of the different mosquito species.

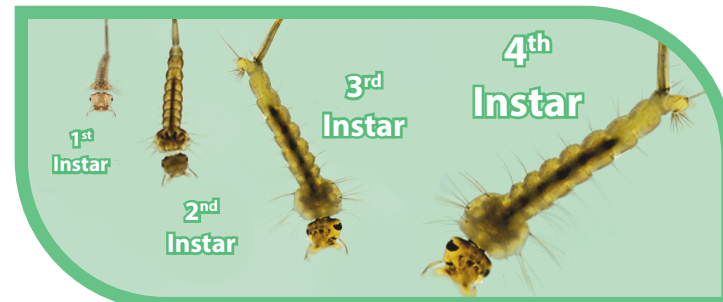
### All mosquitoes must have water to complete their lifecycle.

This water can range in quality and it can be in any container imaginable. The mosquito goes through four separate and distinct stages of its lifecycle: egg, larva, pupa, and adult. Some species can go through their entire life cycle in as little as four days.

#### Egg

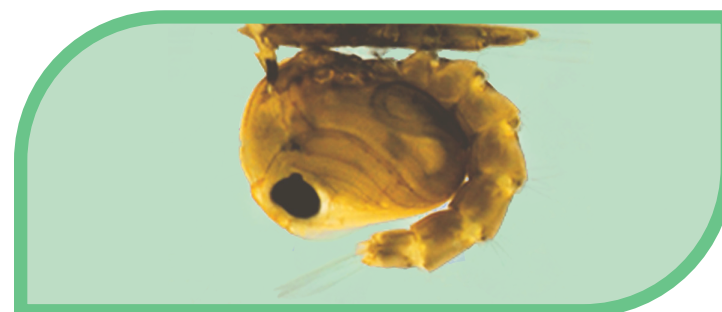
Eggs are laid on or near water or where water will be. They may be laid one at a time or stuck together in rafts of 100-300 eggs. Most eggs hatch into larvae within 48 hours of coming into contact with water.

Eggs vary in form between different species.



#### Larva

Larvae live in water and breathe air from the surface. Larvae feed on micro-organisms and organic matter in the water. They shed their skin four times growing larger after each molt. The stages between molts are called instars. When the 4<sup>th</sup> instar larva molts it becomes a pupa.



#### Pupa

Mosquito pupae also float at the water surface and breathe air. When disturbed, they dive in a tumbling motion and then float back to the surface. The pupal stage does not eat food. This is the time the mosquito turns into an adult. It takes two days before the adult is fully developed.



#### Adult

Newly emerged adults rest on the surface of the water for a short time to allow itself to dry before taking flight. Female mosquitoes feed to get a sufficient blood meal to develop eggs. Male mosquitoes feed only on plant nectar. The life span of the adult mosquito usually depends on several factors: species, temperature, humidity, gender, and time of year. Males live shorter lives.

## 2023 PUBLIC EDUCATION CAMPAIGN

The District's 2023 public education campaign is underway with a few events already done. The Chico Home & Garden Show, Gold Nugget Craft Faire and Red Suspenders Days events were big successes.

All of the events that the District attends have an excellent insect display, as well as a mosquitofish and mosquito larvae display. At these events, the District hands out fly/mosquito swatters, tick identification cards, recyclable shopping bags, and mosquito repellent, free of charge.

The District partnered with Lamar Advertising on a billboard campaign. This year's slogan "Fight the Bite: Cover up. Repel. Eliminate", will rotate on eight billboards throughout the county from May through September.

The District has contracted with Action News Now for a 30 second mosquito awareness animated public service announcement.

Also, the District will continue with its radio and print public service announcements. Radio ads run on four Deer Creek Broadcasting stations and four Results Radio stations. Newspaper and print ads are in circulation, detailing mosquito prevention measures and District contact information.



**Chico Spring Home & Garden Show**  
**April 1<sup>st</sup> & 2<sup>nd</sup>**  
*The largest home and garden show in the North State. Five buildings packed with vendors and outdoor displays at Chico's Silver Dollar Fairgrounds.*



**Gold Nugget Craft Faire**  
**April 29<sup>th</sup> & 30<sup>th</sup>**  
*This annual event was held at Paradise's Terry Ashe Recreation Center featuring a variety of crafts created by artisans from all over Northern California, Oregon, and Nevada.*



**Red Suspenders Days**  
**May 20<sup>th</sup>**  
*This all-day annual event in Gridley was packed with the Little League Pancake breakfast, vendors/food trucks, classic car show, bed races, parade, and live music.*