## HOW DO WE PROTECT YOU?

The Placer Mosquito and Vector Control District is aware of the issues that arise during Anopheles season. Some of the things we do to manage Anopheles populations:

- **Identification and treatment** of larval breeding sources.
- **Surveillance** to monitor mosquito population levels.
- **Community-wide efforts** to reduce adult mosquito abundance.
- **Implementation** of the best available science for mosquito management.
- **Outreach** to educate the public about mosquitoes and mosquito-borne disease.

## HOW CAN YOU PROTECT YOURSELF FROM MOSQUITOES?

- **Keep windows and door** screens in good condition.
- **Keep garage and exterior doors** closed.
- **Wear long sleeves and pants** at dusk and dawn.
- **Use an insect repellent** approved by the EPA and recommended by the CDC.
- **Minimize** outdoor activities at dawn and dusk when mosquitoes are most active.
- **Drain** any standing water around your house.

## THE MOSQUITO LIFE CYCLE

**Egg stage**
An adult female mosquito can lay approximately 100-400 eggs which float on the surface of the water, or eggs may be laid singly on the surface of the water. Within 2-3 days the eggs hatch into larvae.

**Larval stage**
Larvae can be found close to the surface of the water where they breathe and feed. Larvae are found in a wide variety of standing water sources including rice fields, ditches, ponds, and horse troughs. Larvae shed their skin four times during the next several days or weeks, finally changing into a pupa.

**Pupal stage**
In the pupal stage, the mosquito grows inside of a cocoon-like shell. Once fully developed, the pupal skin splits and the mosquito emerges as an adult.

**Adult stage**
The newly emerged adult mosquito rests on the surface of the water until it is strong enough to fly. Female mosquitoes require a blood meal to lay eggs. Male mosquitoes do not feed on blood. Female mosquitoes are attracted by heat and carbon dioxide to hosts such as humans, mammals, and birds. Diseases are transmitted when female mosquitoes feed on an infected host and then feed on an uninfected host.

## FIGHT THE BITE

**by practicing the District's 3Ds of protection:**

1. **DRAIN** any standing water that may produce mosquitoes.
2. **DEFEND** yourself against mosquitoes by using an effective insect repellent, such as DEET, Picaridin or Oil of Lemon Eucalyptus. Make sure you follow label directions!
3. Contact the **DISTRICT** for help. We are here to serve you. Call us at (888) 768-2343, or visit us online at www.placermosquito.org.

***Your tax dollars hard at work***


**Placer Mosquito and Vector Control District**
2021 Opportunity Drive
Roseville, CA 95678

(916) 380-5444 main office
(888) 768-2343 toll free
(916) 380-5455 fax

***www.placermosquito.org***


The Placer Mosquito & Vector Control District is concerned about protecting and preserving the environment. We strive to cut down on waste and use eco-friendly materials wherever possible.

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PLACER MOSQUITO & VECTOR CONTROL DISTRICT

# HAVE YOU SEEN ME LATELY?
# ANOPHELES FREEBORNI
## THE WESTERN MALARIA MOSQUITO

***Protecting Public Health since 2001***

**The Placer Mosquito and Vector Control District** strives to reduce mosquito and other vector populations, promote awareness of vectors and vector-borne diseases, and decrease health risks to residents in Placer County.

Since 2001, the District has worked diligently to:

- **educate and inform** the public about current and emerging mosquito and vector-borne diseases
- **inspect, reduce and eliminate** mosquito breeding sources in Placer County
- **employ Integrated Vector Management** strategies and techniques to reduce vector populations and protect public health from mosquitoes and mosquito-borne diseases
- **use public funds efficiently** and responsibly to achieve the District's mission

***www.placermosquito.org***

# HAVE YOU NOTICED MORE MOSQUITOES LATELY?

Late summer and early fall in western Placer County often brings a high number of the Western Malaria Mosquito (*Anopheles freeborni)*. These mosquitoes disperse from breeding sites in agricultural areas to the west.

This over-wintering pest is a fairly large, brown mosquito with long legs and dark spots on each wing. It is a vicious biter and enters houses readily. This mosquito is found throughout most of California and is a severe pest in rice growing areas.

# ABOUT *ANOPHELES FREEBORNI*

While cold winter weather kills most kinds of adult mosquitoes, the adult female *Anopheles freeborni* hibernates during these months.

In the fall these mosquitoes disperse several miles from their breeding sources to seek shelter in protected places, such as attics and outbuildings. They are often a nuisance at this time.

On warm, sunny days, only screened windows and doors should be opened. Keep screens in good repair. If mosquitoes do get inside your house, they may be found resting on walls, under sinks, in closets, etc.

A warming trend in January or February sounds a wake-up-call to these mosquitoes. They are extremely hungry and are looking for a blood meal that will nourish their developing eggs. Biting females are most bothersome during the afternoons and early evenings. Fortunately, the problem usually lasts only a few weeks.

## Adult behavior

The adult population reaches its peak in August and September. Females hibernate during the winter months and disperse from their hibernating sites in February or March. Females will readily enter houses during peak activity time. Males do not bite but feed on nectar and plant juices.

## Where they breed

Their breeding patterns and life cycle are slightly different from other mosquitoes. *Anopheles freeborni* prefer standing water that is open and sunlit with vegetation and algae present. Such sources include rice fields, creek isolations, ponds, swampy areas, stream edges, and drains.

## Can these mosquitoes transmit disease?

The Western Malaria Mosquito is considered unlikely to transmit West Nile virus. These mosquitoes historically transmitted malaria and were involved in the malaria epidemics during the late 1800's and early 1900's in northern California. Although malaria is not currently a concern in California, the potential for disease transmission exists if malaria is reintroduced through an imported human case. We work closely with state and local health departments to monitor new and reemerging vector-borne diseases.