**MOSQUITOES**

Mosquitoes successfully transmit various diseases such as West Nile virus, Western Equine Encephalomyelitis virus, St. Louis Encephalitis virus, canine heartworm and malaria. There are approximately 3,500 species of mosquitoes distributed worldwide, 53 different species occur in California and over 20 are found in Sacramento and Yolo Counties.

**WHAT IS A VECTOR?**

A vector is an insect or any other animal that transmits a disease to other animals or humans.
MOSQUITO HABITATS

In Sacramento and Yolo Counties immature mosquitoes develop in agricultural, industrial, domestic and natural habitats.

MOSQUITOES AND PUBLIC HEALTH SIGNIFICANCE

Encephalitis Mosquito (Culex tarsalis)

This mosquito can transmit the encephalitis virus to humans. It has been known to transmit West Nile virus, Western Equine Encephalomyelitis virus and St. Louis Encephalitis virus. The Encephalitis Mosquito is distributed throughout Sacramento and Yolo counties. Immature mosquitoes develop in wetlands, duck clubs, rice fields and irrigated crops. The adult mosquito prefers to feed on birds and mammals. It is most active during summer and fall months.

House Mosquito (Culex pipiens)

The House Mosquito has been known to transmit West Nile virus and St. Louis Encephalitis virus. It is common throughout Sacramento and Yolo counties. Immature mosquitoes develop in foul water sources such as dairy drains, catch basins and artificial containers. It prefers to feed on birds but will readily feed on humans. This mosquito is most active during the summer and fall months.

Inland Floodwater Mosquito (Aedes vexans)

This mosquito is a secondary vector for dog heartworm and is a severe outdoor pest. It is common in irrigated pastures and in woodland water course pools. It feeds primarily on mammals. This species is most active from late winter to early fall.

Western Treehole Mosquito (Aedes sierrensis)

This mosquito can transmit the dog heartworm parasite Dirofilaria immitis, and is a severe outdoor pest. It is common in oak woodlands. Immature stages develop in tree rot holes. It feeds primarily on mammals. This mosquito is most active during the late winter months through early spring.

Wetlands Mosquito (Aedes melanimon)

Aedes melanimon is involved in the encephalitis transmission cycle and is a severe outdoor pest. It is common in Sacramento and Yolo Counties. This mosquito develops in wetlands, duck clubs and irrigated pastures. It prefers to feed on mammals. Ae. melanimon is most active during the fall and spring months.

TICK

The bacterium that causes Lyme disease is called Borrelia burgdorferi. The primary vector for Lyme disease in Sacramento and Yolo Counties is Ixodes pacificus, also known as the Western black-legged tick.

Ticks are usually found in grassy areas, brush or wooded areas. They wait on the tips of vegetation for a human or other animal host to pass by (this is called “questing”). As the host brushes against it, the tick makes contact, looks for a suitable location and begins the feeding process.

Contrary to popular belief, ticks do not embed their heads into the skin. Ticks are equipped with mouthparts adapted to penetrate and hold fast in the skin of its host. Additionally, they secrete a cement-like material that helps them stay attached to their host.

Ticks go through four life stages: egg, larva, nymph and adult. Both males and females require blood meals in the last three stages of their life cycle.

MOSQUITO LIFECYCLE

Water that remains stagnant for more than five days can breed hundreds of mosquitoes therefore it is imperative to properly manage water on your property. Without water, mosquitoes cannot survive.

The illustration below depicts the mosquito life cycle from egg, larva, pupa to adult. You can prevent mosquitoes from developing by draining any container that supports this life cycle.

Note—All images are in the public domain and thus free of any copyright restrictions.