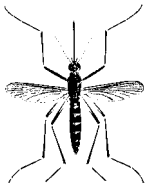
MOSQUITO NOTES



ENCEPHALITIS MOSQUITO

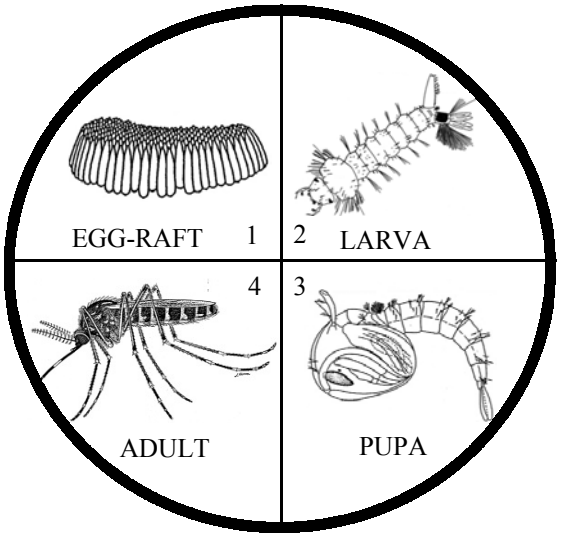
CULEX TARSALIS

GENERAL INFORMATION

This specie is referred to as the "encephalitis" mosquito because it is the primary vector (carrier) of encephalitis viruses in the Western United States.

C. tarsalis is a dark bodied, medium-sized mosquito with a prominent white band on its' proboscis (beak) and white bands on the tarsi (feet). It is further characterized by a white stripe on the sides of the rear legs and dark inverted V's on the underside of a blunt-tipped abdomen.

This is the most widespread mosquito specie in California. It occurs from Mexico into Canada and in the Western, Central and Southwestern United States.



LIFE CYCLE

Mosquitoes have four distinct life stages as seen in the illustration, with the first three stages of *Culex* (egg-larva-pupa) being spent in the water.

An adult female lays about 150-200 eggs in clusters called rafts, which float on the surface of the water until they hatch in about two days. Females usually prefer to lay eggs in clear standing water sources. These include rain ponds, marshes, reservoirs, pools, rice fields, irrigation tail waters, ditches, and domestic sources. Maximum populations usually occur in late summer.

The eggs hatch into larvae (wigglers), which then feed on small organic particles and microorganisms in the water. At the end of the larval stage, the mosquito molts and becomes the aquatic pupa (tumbler).

The pupa is active only if disturbed, for this is the "resting" stage where the larval form is transformed into the adult. This takes about two days during which time feeding does not occur. When the transformation is completed, the new adult splits the pupal skin and emerges. Under optimum conditions development from egg to adult takes about 10 days. However, all mosquito developmental times are dependent on the temperature and nutrients of the water in which they mature.

HABITS (ADULT BEHAVIOR)

The female of this species are moderate but common biters of man, attacking at twilight and after dark. Although they feed on man and domestic animals, this species prefers the blood of birds. Males do not bite, but feed on nectar and plant juices. Although capable of moving 10-15 miles, adults are commonly found near their aquatic habitat. Bites seldom cause service requests.

ECONOMIC AND MEDICAL IMPORTANCE

This mosquito is the most important known vector of Western Equine Encephalitis (WEE) and St. Louis Encephalitis (SLE) in California. California Encephalitis (CE) virus has also been isolated from it. From a disease standpoint, this is currently the most important species of mosquito in the state.

CONTROL METHODS, PREVENTION AND CORRECTION

Where possible, the best approach is to prevent mosquitoes from breeding by eliminating or modifying breeding sites. This may be accomplished by such actions as filling, dumping, ditching or otherwise draining the source.

BIOLOGICAL CONTROL

Often the encephalitis mosquito may be controlled by stocking mosquito fish *(Gambusia affinis)*.

FEMALE

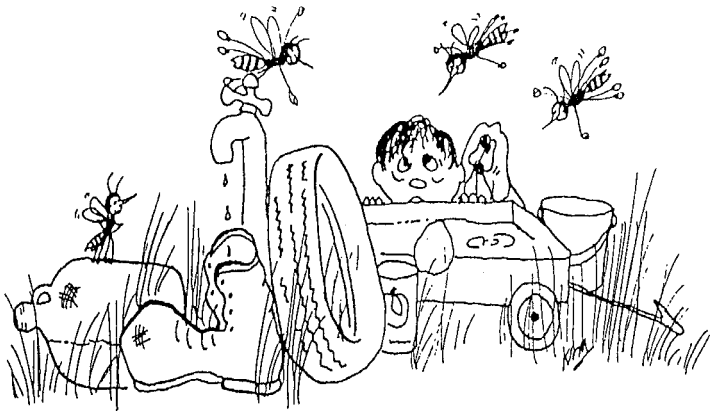
CONTROL MEASURES

Due to the often delicate environmental interrelationships of some ponds, chemical control should only be practiced by trained mosquito abatement or health department personnel. These officials have knowledge of the proper compounds and application techniques to assure minimal environmental side effects. Public health agencies generally are able to provide information and assistance where organized mosquito control programs are unavailable.

It is important to remember that chemical control provides only temporary relief and is used by public agencies until other measures can be implemented. Commonly available insect repellents may be helpful to people visiting areas where this mosquito is present.

YOU CAN PREVENT MOSQUITO BREEDING

MOSQUITO SOURCE…



WHAT TO DO?

- EMPTY OR COVER RECEPTACLES THAT WOULD OTHERWISE HOLD WATER.
- PUT MOSQUITO FISH IN PERMANENT PONDS.
- STORE OLD TIRES INSIDE OR COVER THEM.
- CLEAN CLOGGED GUTTERS.
- MANAGE IRRIGATION WATER EFFECTIVELY.
- REPORT MOSQUITO BREEDING SITES.

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