

Featured Mosquitoes

5. THE ENCEPHALITIS MOSQUITO (CULEX TARSALIS)

Culex tarsalis is widely distributed in North America west of the Mississippi River, between southern Canada and northern Mexico. It occurs throughout California, from sea level up to nearly 10,000 feet elevation, and is especially abundant in the Central Valley and coastal regions, including Marin and Sonoma Counties.



As its name suggests, *C. tarsalis* has bands of white scales around the joints of its tarsi (legs). There is also a pale band around the center of the proboscis, a line of white scales extending along the hind tibia and femur, and a series of V-shaped spots made of dark scales on the underside of each abdominal segment.

This mosquito develops rapidly and produces multiple generations. In the hot summer season, egg to adult development occurs in as few as four to ten days. A female can lay six or seven times, with some 300 eggs in a batch. Without control efforts, local populations can reach huge numbers in a short time.

Culex tarsalis breeds in nearly every freshwater source except treeholes. Larvae are found in all but the most polluted ground pools. Summer agricultural irrigation produces an especially favorable environment, with highest population densities coinciding with the months of most intense irrigation.

During the daytime, adults rest in tree cavities, animal burrows, and artificial habitats like barns, chicken houses and culverts. In most areas, they feed equally on birds and mammals including man, depending on availability. After years of intense efforts to keep them under control, vast populations in the central valley have become resistant to nearly all the common chemical insecticides.

Culex tarsalis is the most important carrier of western equine and Saint Louis encephalitis in California, as well as in much of the western U.S. It occurs together with wild birds - the natural reservoir of infection, and virus is often discovered in field-

collected specimens. It is also readily infected after taking an infected blood meal, and easily transmits the virus during its later blood meals. The appearance of antibodies against encephalitis virus in the flocks of sentinel chickens kept in several parts of the state is a signal alarm to the districts to begin quickly and aggressively reducing *Culex tarsalis* numbers around populated areas