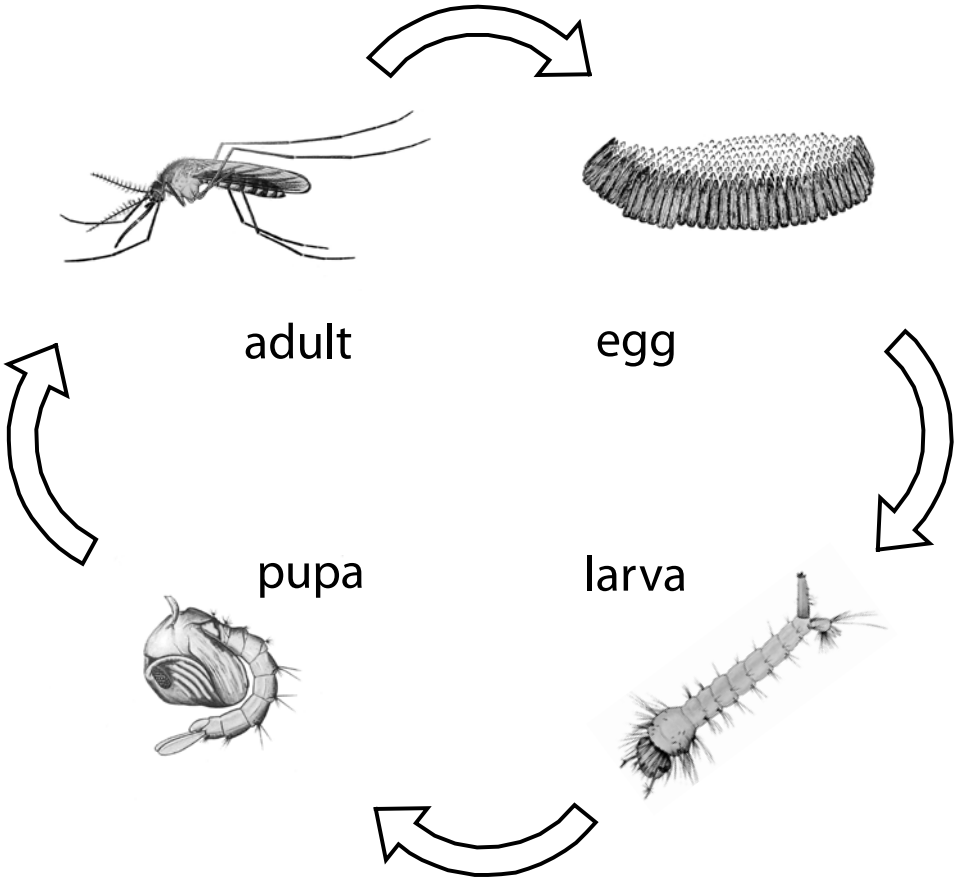
Mosquito Life Cycle



Mosquitoes must have standing water to develop

EGG

Culex and *Culiseta* mosquitoes lay their eggs on the surface of fresh or stagnant water. The water may be in buckets, barrels, horse troughs, ornamental ponds, swimming pools, puddles, creeks, ditches, or marshy areas. *Culex* and *Culiseta* mosquitoes lay their eggs one at a time, sticking them together to form a raft of from 200-300 eggs. A raft of eggs looks like a speck of soot floating on the water and is about 1/4 inch long and 1/8 inch wide.

Anopheles mosquitoes lay their eggs singly on the water, not in rafts. Their eggs are boat shaped with lateral floats.

Aedes mosquitoes lay their eggs singly just above the water line on damp substrate, such as soil, vegetation, containers, etc. *Aedes* eggs can withstand drying out and hatch only when flooded with water (salt water high tides, irrigated pastures, treeholes, flooded stream bottoms).

LARVA

Mosquito larvae, commonly called “wrigglers,” must live in water. Larvae must come to the surface at frequent intervals to obtain oxygen through a breathing tube called a siphon. The larva eats algae and small organisms which live in the water.

During growth, the larva molts (sheds its skin) four times. The stages between molts are called instars. At the 4th instar, the larva reaches a length of almost 1/2 inch. When the 4th instar larva molts it becomes a pupa.

Note: *Anopheles* are unlike *Culex, Culiseta*, and *Aedes* larvae since they do not have a breathing tube, they must lie parallel to the water surface in order to get a supply of oxygen through a breathing opening.

PUPA

Mosquito pupae, commonly called "tumblers," must live in water from 1 to 4 days, depending upon species and temperature. The pupa is lighter than water and therefore floats at the surface. It takes in oxygen through two breathing tubes called "trumpets." When it is disturbed it dives in a jerking, tumbling motion and then floats back to the surface. The pupa does not eat.

The metamorphosis of the mosquito into an adult is completed within the pupal case. The adult mosquito splits the pupal case and emerges to the surface of the water where it rests until its body can dry and harden.

ADULT

Only female mosquitoes bite animals and drink blood. Male mosquitoes do not bite, but feed on flower nectar. Both sexes of mosquitoes drink nectar (for water and sugars) and help in the pollination of many flowers.

Aedes mosquitoes are painful and persistent biters, attacking during daylight hours. They prefer to bite mammals like humans. *Aedes* mosquitoes are strong fliers and are known to fly many miles from their breeding sources. Two different species of *Aedes* breed in salt marshes, and huge numbers of them can fly off in a very short period of time.

Culex mosquitoes are painful and persistent biters also, but prefer to attack at dusk and after dark. They readily enter dwellings for blood meals. Domestic and wild birds are preferred over man, cows, and horses. *Culex tarsalis* is known to transmit West Nile virus and encephalitis (sleeping sickness) to man and horses. *Culex* mosquitoes usually live only a few weeks during the warm summer months. Females which emerge in late summer search for sheltered areas where they "hibernate" until spring. Warm weather brings them out in search of water on which to lay their eggs.

Culiseta mosquitoes are moderately aggressive biters, attacking in the evening hours or in shade during the day. In summer, the most common breeding area for these mosquitoes are backyard sources such as containers and fishponds.

Anopheles mosquitoes are the only mosquito which transmits malaria to man. Luckily for us living in the Bay Area, they are the rarest of the four species listed here.