



© David Rosen

common name	Mosquito
scientific name	several different species
phylum	Arthropoda
class	Insecta
order	Diptera
family	Culicidae
habitat	larvae live in still water
size	larvae 5 to 13 mm, adults 1 to 1.5 cm
description	Adult Mosquitoes are gray or black and have two scaly wings. Females have a long, straw-like mouth for sucking blood. Males look different, with feathery antennae and mouthparts that cannot pierce skin. Mosquito <a href="#">larvae</a> are brown, black or gray and have a breathing tube on their tail.

- fun facts** When a female Mosquito is ready to lay her eggs, she searches for stagnant (still) water with plenty of rotting detritus and bacteria for her larvae to eat. Her antennae can smell the gas that the bacteria make when they decompose detritus. More gas means more food for her young!
- life cycle** The Mosquito goes through four stages during its life cycle: egg, larva, [pupa](#), and adult. The eggs normally hatch into larvae within 48 hours. Larvae must live in water from 7 to 14 days depending on the water temperature. During this time, the larva [molts](#) 3 times and grows to almost 1 cm. After the larva molts the fourth time it becomes a pupa. The pupa is lighter than the water and floats on the surface. The pupa does not eat. In 1 to 4 days, the adult Mosquito comes out of the pupa. It rests on the surface of the water until its body dries and hardens enough to fly away.
- ecology** A female Mosquito rarely lays her eggs in the clean water of a vernal pool. In a healthy vernal pool her larvae would have to compete with many vernal pool

critters for food. So the female Mosquito lays her eggs in stagnant waters, such as roadside ditches, wetlands, and even buckets of water in your backyard. Here the larvae find plenty of Algae, detritus, Bacteria and Protozoa to eat. In vernal pools, Mosquito larvae are eaten by [aquatic insect larvae](#) such as the larvae of Dragonflies and Damselflies.

Adult female Mosquitoes feed on the blood of birds, lizards, people and other mammals. They need the protein found in blood to develop healthy eggs. Male Mosquitoes do not lay eggs, so they do not need blood. They feed on the nectar of flowers. In vernal pool grasslands, bats, spiders, Dragonflies, Damselflies, Killdeer, and other birds eat Mosquitoes.

When a vernal pool is polluted, more Mosquito larvae occur in it. This is a sign that the food web has been disrupted. When urban runoff kills aquatic critters, it leaves more detritus, Bacteria, and Protozoa for Mosquito larvae to eat.

### investigate

West Nile Virus is a serious disease spread by some species of Mosquitoes. Fear about the disease can lead communities to spray pesticides over vernal pool grasslands, even though the Mosquitoes that carry West Nile Virus do not lay eggs in vernal pools. Even worse, pesticides can kill many other vernal pool species as well. Could spraying vernal pool grasslands actually lead to more Mosquitoes in vernal pools? How?

Water has a tight surface, like a very thin balloon. It is called surface tension. Mosquito larvae hang from it. Few aquatic critters can breathe without it. If oil or soap gets into runoff, the surface tension of water is destroyed. This kills most aquatic species. You can see this effect with Mosquito larvae. Find some larvae in a container of water (and detritus) that has been sitting outside for a few weeks. Break the water's surface tension by stirring the water. Watch what the larvae do. Add 4 to 8 drops of dish soap (or cooking oil) to the surface. Watch what happens. Pour out the water so the Mosquitoes don't hatch.

