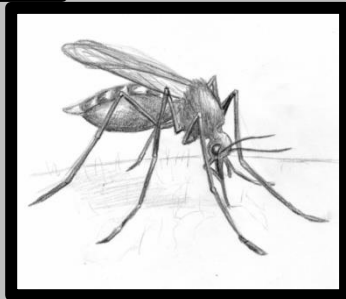


# Mosquito



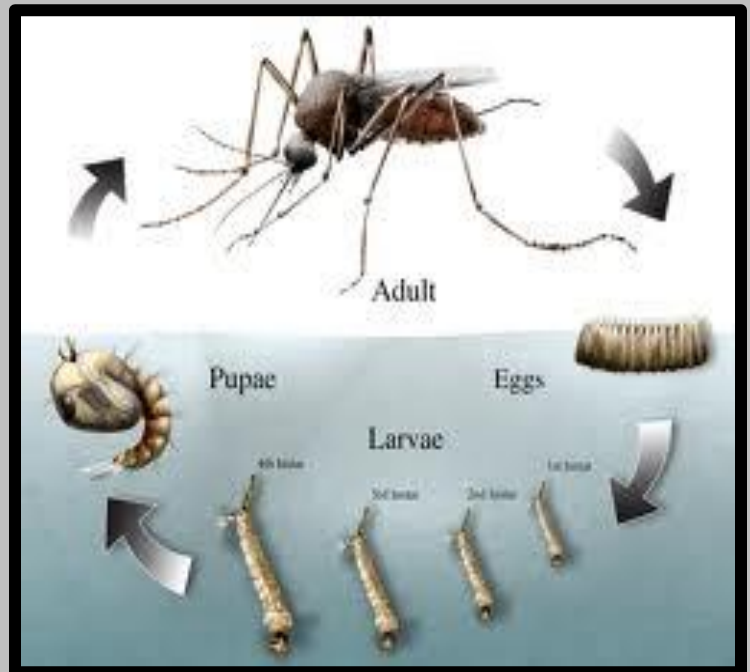
## *Annual Mosquito Abatement Program in the Clear Creek Drainage.*

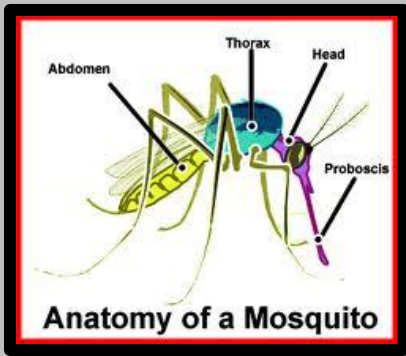
We apply larvicide throughout the summer to all mosquito infested water bodies from Buffalo to Ucross and in the City of Buffalo. The larviciding program has been very successful over the past couple of years with no impact to bees and without the invasiveness of an aerial program. We do have ground fogging equipment, also, if needed and requested if an isolated adult outbreak occurs.

*Available county wide cost share program on larvicide.*

**Mosquitoes** are a family of small, midge-like flies, the Culicidae. Although a few species are harmless or even useful, most cause a nuisance by sucking blood from vertebrates, including humans. Several of the most harmful human and livestock diseases are transmitted by mosquitoes during feeding. Accordingly, some authorities argue that mosquitoes are the most dangerous animals on earth.

Like all flies, mosquitoes go through four stages in their life cycle: egg, larva, pupa, and adult or imago. In most species, adult females lay their eggs in standing water; some lay eggs near the water's edge; others attach their eggs to aquatic plants. Each species selects the situation of the water into which it lays its eggs according to its ecological adaptations. The first three stages—egg, larva and pupa—are largely aquatic. Larvae develop through four stages, or instars, after which they metamorphose into pupae. At the end of each instar, the larvae molt, shedding their skins to allow for further growth.





Larvae



**Mosquito-borne diseases include:**

- Viral diseases, such as yellow fever, dengue fever and Chikungunya, transmitted mostly by *Aedes aegypti*
- The parasitic disease malaria, carried by mosquitoes of the genus *Anopheles*
- Lymphatic filariasis (the main cause of elephantiasis) which can be spread by a wide variety of mosquito species
- West Nile Virus reached the eastern shore of the US in early 2000's and rapidly spread west, despite predictions by many on the contrary. While effects of the virus have tempered in recent years, it was responsible for several human death and illness as well as many horse and certain species of bird deaths, which actually amplify the disease. The primary vector for the disease are *Culex sp.*

**Natural predators**

The dragonfly nymph eats mosquitoes at all stages of development and is quite effective in controlling populations. Gambusia, also called mosquito fish, eat mosquito larvae and can be introduced into ponds. Although bats and purple martins can be prodigious consumers of insects, many of which are pests, less than 1% of their diet typically consists of mosquitoes. Neither bats nor purple martins are known to control or even significantly reduce mosquito populations.

A number of fish are also known to consume mosquito larvae, including bass, bluegills, piranhas, Arctic char, salmon, trout, catfish, fathead minnows, the western mosquitofish (*Gambusia affinis*), goldfish, guppies, and killifish.



**Larvicides (used by Johnson County Weed & Pest)**

**VectoBac G** – insecticide for use against Mosquito larvae. Used when late 3<sup>rd</sup> and early 4<sup>th</sup> instar larvae predominate.

**Altosid Briquets** - designed to control mosquitoes in small bodies of water. 30-Day Briquets can be placed in the proper sites throughout the mosquito season, at any stage of larval development.

