

Natural mosquito control in the wetland nursery

Mosquito fish, or *Gambusia minnows*, are by far the most efficient natural predators of mosquitoes. They are utilized by some mosquito control districts across the country.



- According to studies, a single mosquito fish can eat up to 50 mosquito larvae in half an hour. They have been shown to consume 42-167% of their body weight in various invertebrate prey including mosquito larvae per day.
- A mature female mosquito fish will typically give birth to 15 to 40 babies (fry) in each brood, and produce 6 to 8 broods during a season. Mosquito fish do not lay eggs. They are live bearers, like guppies.
- The mosquito fish *Gambusia affinis* is native to Texas and can tolerate high water temperatures, low dissolved oxygen levels, and some water pollutants found in urban creeks.

Dragonflies and their cousins, the damselflies, are good mosquito predators because in the aquatic larval stage, one of their food sources is mosquito larvae. During this “naiad” stage (which can last up to six years) they will do most of their damage to mosquito populations. Adult dragonflies typically like to feed during the day, when most mosquitoes are hiding. These dragonfly naiads as they are called are voracious and bold little predators and will take on almost any aquatic animal including other naiads.



***Bacillus thuringiensis* (Bt)** is a naturally occurring bacterium common in soil. Several strains can infect and kill insects by paralyzing their digestion. To control mosquito larvae, granules (or slow-release rings) containing the *israelensis* strain are placed into buckets of plants or puddles of standing water. Bt persistence in water is longer than on sun-exposed leaf surfaces, but must be reapplied if favorable mosquito breeding conditions last for several weeks.



In a healthy ecosystem, mosquitoes will also be eaten by purple martins, bats, and frogs.

Adapted from these resources:

tarrantcounty.com/ehealth/lib/ehealth/Gambusia_Affinis_Stocking_Guide_for_Local_Governments.pdf

<http://www.wbrcouncil.org/Departments/Mosquito-Abatement/Natural-Mosquito-Killers>

<http://www.ext.colostate.edu/pubs/insect/05556.html>

