



Urban Harvest

## **Dragonflies: Mother Nature's Mosquito Control**

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Along with heat and humidity, mosquitoes are a constant to Houston summers. We can't control the weather, but we've tried everything under the sun to control mosquitoes. To some, the introduction of mosquito misting systems has been the definitive answer to the problem.

Most systems use the organic pesticide Pyrethrum, which many claim to be a safe and effective solution. Are we, however, creating a super mosquito that one day may acquire a resistance to Pyrethrum, forcing municipalities to use more toxic chemical solutions for their fogging programs?

Many consumers equate the word organic with non-toxic. Nothing could be further from the truth. Pyrethrum is an indiscriminate pesticide that kills beneficial insects such as lace wings and lady bugs, along with mosquitoes and other insect pests. It is a poison whose long term effects from repeated applications are still unknown.



Dragonflies hunt mosquitoes, gnats and flies during their winged adult life

Why take the risk and go to the expense of costly solutions when Mother Nature provides the best remedy? Some homeowners encourage Purple Martins or bats, both voracious mosquito eaters, but I think dragonflies outperform both and are much more fun to have in the garden.

I am a member of a community garden where there is a pond that is home to hundreds of dragonflies. We have red ones, orange ones, blue ones and green ones. Technical terms I know, but I'm more of an observer than a student. I just know that the dragonflies are there, and the mosquitoes are not!

Our garden has a number of areas with standing water, prime mosquito breeding ground. In six years of gardening there, I have never been bitten by a mosquito. I don't know of any other place in Houston, with the possible exception of being in the back of a convertible going 60 miles per hour down I-10, where I can make the same claim.

### **LIFE OF THE DRAGONFLY**

Dragonflies are aquatic insects and building a pond in your garden will provide the habitat they require. Even townhouse gardens can benefit from the addition of a mini-habitat using a half whisky barrel. Life as a dragonfly begins as an egg. Females plant their eggs in foliage above or below, depending on the species, the waterline of small ponds.

Once hatched, the larva becomes an aquatic predator, feeding on other aquatic insects, including mosquito eggs and larvae. Some species spend a short time, one to two months, in the larva stage, while others can spend up to five years in this stage of development.

At the end of this stage, the larva climbs out of the water and into the air on a plant stalk, a rock or any other solid structure that provides an exit from the pond. They then seek protection in nearby foliage where they can safely and literally spread their wings.

Adults spend the next few days to two weeks away from the water as they mature and develop vibrant colors. They return to the pond when they are ready to reproduce. Adult dragonflies feed on other insects like flies and mosquitoes. Given Houston's mosquito population, they stay happy.

### **CREATE A HABITAT**

To create a dragonfly habitat, you will need some sort of a water element. Typically an earthen or plastic lined pond with sloped sides works best. However, you can be

successful using a whiskey barrel or a fountain basin. The water needs to be clean and oxygenated. So that means you'll need a small pump to add some movement to the water. Keep it small, you don't want a lot of movement.



Widow Skimmer dragonfly, female. In a weedy roadside area near ponds.

Dragonflies are sun lovers and the pond should be located in the sun to provide warmth to the cold blooded larva; without it they become inactive. Adults require warm temperatures before they can fly. At least 70% of the pond should receive sun. The remaining 30% should be covered with floating plants such as water lilies to provide shelter and inhibit algae growth.

Provide erect and submerged plants as well. Submerged plants are home for the larva and erect plants allow a way out of the water when the larva becomes an adult. Floating plants such as water lilies provide an area where adults mate. A grassy or short shrubby area adjacent to the pond serves as a safety zone for newly emerged adults while they dry out and spread their wings. It also attracts small insects they feed on.

Unless you live near an existing pond inhabited by dragonflies or they regularly visit your garden, you may experience difficulty in establishing a population. Although, at our community garden, they just showed up and we are a stone's throw from the Southwest Freeway.

To jump start your habitat, take a few spadefuls of soil from a pond that you know has an existing population. You will most likely bring home both mosquito and dragonfly eggs and larvae, but that's OK. You need the mosquitoes to feed the dragonflies.

Though they might be fun to watch, do not add fish. They eat the eggs and larva. And if you are installing this habitat to fight mosquitoes, it is possible that you have a bug zapper. Turn it off. It zaps the dragonflies, too.

This column is produced by Urban Harvest. Learn about gardening classes, community gardens and orchards, farmers' markets and more at [www.urbanharvest.org](http://www.urbanharvest.org).



A skimmer dragonfly perches on a water plant at Shores Lake in Franklin County, Ark., after a rain shower.