

Garden Good Guys – Dragonflies

Is it a bird? Is it a plane? Is it a dragon? Is it a fly? What in the world is a Dragonfly? These unique creatures obviously aren't birds, planes, dragons or flies. They are extraordinary insects that predate dinosaurs by over 100 million years and birds by some 150 million. In fact, a fossilized dragonfly from 250 million years ago was found to have a wingspan of 28 inches! Fortunately, present-day dragonflies are considerably smaller.

Easily recognized for their rather ethereal beauty, the "dragon" portion of their name comes from their fierce jaws that they use to catch their flying prey. The "fly" portion of their name is apt – they are the world's fastest insects, capable of reaching speeds of up to 60 mph. They have some other colorful, descriptive names - "mosquito hawks" because they catch and eat so many mosquitoes and "devil's darning needle" reflects their unique body shape.



Dragonflies and their smaller counterparts, damselflies, feed on insects like gnats, mosquitoes, midges, flies, butterflies and moths and even other, usually smaller dragonflies. Near water, they will eat anything small enough that moves - water beetles, small fishes, salamander larvae and smaller dragonfly larvae. They don't suck blood and they don't bite or sting humans; they don't have any device to sting with. Why are these insects beneficial to the gardener? In addition to being predators of a number of insect pests, their appetite for mosquitoes alone provides a more comfortable and safer environment to garden in.

Dragonflies are insects belonging to the order *Odonata* which is characterized by large multifaceted eyes, two pairs of strong transparent wings, and an elongated body. They are distributed throughout the world with more than 5,000 described species. They are robust insects ranging in body length from 1 to 4 inches. The adults are often brightly colored and have a long slender abdomen. They have two pairs of almost equally sized long thin membranous wings; both pairs of wings usually have a stigma (a dark or colored patch near the middle of the leading edge) and can flap or beat their wings independently. The wings do not fold and are held outstretched when at rest. They do have strongly biting mouthparts and are active and aggressive carnivores, both as adults and as young (called nymphs). They also have excellent eyesight due to their unique eye structure. Their eyes have up to 30,000 facets; each one is a separate light-sensing organ arranged to give nearly a 360° field of vision and enable them to detect even the slightest movement.

Apart from mankind, dragonflies don't have many enemies. To some extent, the presence and abundance of dragonflies can serve as an indicator of ecosystem quality. Local populations can be strongly affected by any change in water flow and quality or in aquatic or waterside vegetation. The greatest numbers of species are found at sites which offer a wide variety of microhabitats, prey, and clean water. In order to encourage them to frequent your garden, you can put in a small pond – even a wooden half barrel can work. Whatever the size of the pond, it should be located where it will be protected from wind and will get midday sun. Ideally, it should vary in depth, shallow at the edges and at least two feet deep in the center, and include a variety of water plants. If possible, put a few flat rocks near the pond's edge. Dragonflies like to warm up by basking in the sun.

Although experts say that about 15 percent of North America's 307 dragonfly species are in danger of extinction, the dragonflies at greatest risk for extinction are the stream dwellers, species that won't be attracted to your backyard pond. Craig Tufts, chief naturalist for the National Wildlife Federation says "You can help protect their habitats by supporting laws and practices that reduce water pollution and protect riparian areas; you'll be helping a lot of other creatures in the process." If you're fortunate enough to have these lovely creatures in your garden, enjoy their beauty and help protect their environment.

Photo courtesy of Baldo Villegas