

DRAGONFLIES *submitted by Shannon Neveaux*

I have always been curious about dragonflies. I couldn't help wondering about all the different colors. So when I started doing research for this article I visited Wikipedia and was amazed to find out there are over 3000 species in the world today. You will find them on every continent except Antarctica. Most live in tropical regions.

Dragonflies can be mistaken for the related group, damselflies. Most dragonflies hold their wings flat and away from the body, while damselflies hold the wings folded at rest, along or above the abdomen. We'll explore damselflies in another article.

Dragonflies have two pairs of wings and three pairs of legs. The legs are rarely used for walking, but are used to catch and hold prey, for perching, and for climbing on plants. Each foot is armed with a pair of claws. In males, one row of spines on each front leg is modified to form an "eye brush", for cleaning the surface of the compound eye. Being cold-blooded, they can raise their temperature by basking in the sun. They often move to the shade if they become too hot.

They are fast, agile fliers, sometimes migrating across oceans, and are often found near water. (Loss of wetland habitat threatens dragonfly populations around the world.) In flight, the adults can propel themselves in six directions: upward, downward, forward, back, to the left and to the right. Dragonflies have a high power/weight ratio, and have been documented accelerating at 4 G linearly and 9 G in sharp turns while pursuing prey. In general, large dragonflies like the hawkers have a maximum speed of 22–34 mph with average cruising speed of about 10 mph.

Dragonflies are predators, both in their aquatic larval stage (nymphs or naiads) and as adults. Nymphs feed on a range of freshwater invertebrates and larger ones can prey on tadpoles and small fish. Adults capture insect prey in the air, making use of their acute vision and highly controlled flight. They are almost exclusively carnivorous, eating a wide variety of insects ranging from small midges and mosquitoes to butterflies, moths, damselflies, and smaller dragonflies. A large prey item is subdued by being bitten on the head and is carried by the legs to a perch. Here, the wings are discarded and the prey is eaten head first. A dragonfly may consume as much as a fifth of its body weight in prey per day. Too bad they don't eat love bugs!

Many dragonflies, particularly males, are territorial. Some defend a territory against others of their own species, some against other species of dragonfly and a few against insects in unrelated groups. A particular perch may give a dragonfly a good view over an insect-rich feeding ground. Swarms of feeding adults gather to hunt on swarming prey such as emerging flying ants or termites.

Adult males vigorously defend territories near water; these areas provide suitable habitat for the larvae to develop, and for females to lay their eggs. Egg-laying involves not only the female darting over floating or waterside vegetation to deposit eggs on a suitable substrate, but also the male hovering above her or continuing to clasp her and flying in tandem. Flying in tandem has several advantages. Males can keep other males from mating with the female and that less effort is needed by the female for flight and more can be expended on egg-laying, and when the female submerges to deposit eggs, the male may help to pull her out of the water.

Most Dragonflies have short lifespans which is an average of 7 months. Several years of their lives are spent as nymphs living in fresh water. The adults may be on the wing for just a few days or weeks.

I was able to get a few pictures of dragonflies at the park. So I spent a considerable amount of time reading the descriptions trying to figure out which species they were. I luckily stumbled upon a report listing 24 Dragonflies that have been collected or observed in Vermilion Parish, LA. That helped me narrow it down. I have included the link at the end of this article.

I believe, I was able to photograph the **eastern pondhawk**, also known as the **common pondhawk**, (*Erythemis simplicicollis*), a dragonfly of the family Libellulidae. Native to the eastern two-thirds of the United States and southern Ontario and Quebec, Canada. It is a dragonfly of ponds and still waters. The species is distinguished in that the female is bright green with a banded abdomen and the mature male has a blue abdomen with a green face and green and blue thorax. Over the course of their adult lives the green of the male is gradually transformed into a duller shade of blue and finally a powdery bluish-grey. The wings are distinctively veined and have dark margins near the apices. The length of this dragonfly is 1.4 to 1.9 in.

The eastern pondhawk is an athletic, swift-flying predator, able to catch damselflies and other insect prey on the wing. In between hunts it rests on vegetation, ready to take to the air if prey comes within sight. When newly emerged, the dragonflies at first hunt away from water. After about two weeks they return to the ponds and males set up territories, chasing away rivals. The males guard the floating algal mats that make suitable egg-laying sites. Satellite males remain nearby, awaiting an opportunity to intercept females or seize territories.

Mating takes place while the dragonflies are perched on vegetation close to the water. Within one minute of mating, the female starts to lay her eggs, the male hovering nearby to guard her. She flies low over the pond, dipping her abdomen into the water and depositing her eggs at intervals. Some females mate several times during a single day. The reproductive adult has a lifespan of about ten days.

The orange looking dragonfly looks like a **Needham's Skimmer** (*Libellula needhami* in the *Libellulidea* family). It's found in the Caribbean, Central America and North America.

As I read some of the descriptions, I realized that I have seen quite a few of these fast fellas in the neighborhood and I look forward to getting more pictures. Help us start a picture collection. Get your camera out and get to snapping, then email (info@friendsofpalmetto.org) or Facebook message us pictures of dragonflies that you see at the park. We'll do our best to ID and post. If you are an authority on dragonflies or other 'bugs', we could really use your help to learn more about these little beings who call Palmetto Island State Park home.

