



The Flying Dragons

Now that summer is upon us, we are seeing wonderful sights around ponds and lakes. The dragonflies are emerging and showing us their bright colors as they cruise along searching for prey just above the water.

Dragonflies are built much like helicopters. They have long slender abdomens that function as rear rudders to stabilize them in flight, they have very large eyes reminiscent of the front sensors on military helicopters, and four large membranous wings. The front and hind wings alternate their up and down motion in flight and, if seen in slow motion, look all the world like a helicopter's rotors. They can easily use their wings to hover motionless and can even move backwards.

Dragonflies catch their prey on the wing, and use their legs to catch the hapless creature they are having for lunch. The three pairs of legs are of different lengths, the front pair being the shortest and the hind the longest. These 'flying dragons' hold their spiny legs spread like a basket, and scoop up their quarry. The creature is then devoured by the incredibly large jaws that look like large teeth. It is this tooth-like appearance that gives the dragonfly its Order name "Odonata" which translates as "big tooth".

The immature nymph form of the dragonfly is equally interesting. They are aquatic critters that breathe by means of gills. The location of this breathing apparatus is rather unusual. They are called "anal gills" for good reason. The nymph, or naiad as it is called, crawls along the bottom of a pond or lake and searches for its prey, which can include fish fry! The remarkable part of this form is its lower jaw. This is a long hinged structure that the naiad folds back between its six legs as it moves about. When prey is sighted, the immature sneaks up and, when it is within range, the lower hinged jaw is shot forward and pinchers on the end of the jaw grasp the meal and then it is pulled back to the waiting mandibles. This is a lightning fast motion and reminds one of the tongue of a frog thrust out for a tasty morsel.

Closely related to dragonflies are the damselflies. They belong in the same Order as the flying dragons. They are much more delicate, but have the same general body form of the dragonfly. You can always tell the difference between the two by the fact that damselflies always sit at rest with their wings folded over their backs, whereas the dragonfly rests with its wings straight out from the body. The nymphs are similar to dragonflies, but they have feathery gills at the end of the abdomen. They also are much more slender.

Next time you see a dragonfly or damselfly, take a moment to watch it. They are truly fascinating creatures! By the way, fossil dragonflies from the carboniferous period had over two foot wingspans. Glad they are not around now!

