

July-August 2009

THE DAZZLING DRAGONFLY

by Lanny and Marilyn Johnson

If you are ever around lakes, ponds, streams or wetlands, keep your eyes open for a fascinating and beautiful long-winged insect. You might see one perched on a reed, warming in the sun, with its wings outstretched. Or you might see one zooming over the water like a little supercharged helicopter, zigzagging and darting this way and that. They might race towards you at a terrific speed, stop in an instant, hover, move backwards, buzz to the left, and dart to the right, hover again, and then rapidly lift away. You witnessed the wonderful flying antics of a very well designed insect that God made ... the dragonfly.

Dragonflies belong to a group of insects called *Odonates*. The Greek word "odon" means tooth. So, dragonflies are hunters with teeth. They have tapered bodies with long, narrow needle-like abdomens (stomachs). The adults are often brightly colored. Dragonflies not only come in green, red, yellow, fuchsia, orange, pink, blue, saffron, black, emerald, violet, maroon, and earth tones, but also in dazzling metallic colors.

On the backs of dragonflies are two pairs of long, slender wings, which might be colored, spotted, banded, or clear. The wings are very

thin and look like they are covered with delicate tissue paper. However, the wings have many net-like veins running throughout them, making them very light, yet strong and powerful. These well-designed wings allow the dragonfly to fly very fast (60 miles per hour!). With a wingspan usually between 1 to 7½ inches long, they are believed to be the fastest flying insects. Dragonflies spend a great deal of time in the air, hunting, defending their territory, and looking for a mate. When they do perch, their wings do not fold, but are held outstretched. Damselflies are closely related to the dragonflies. However, damselflies are usually more slender and hold their wings together above the body when at rest.

The dragonfly is specially designed to allow it to turn its head in all directions. On the dragonfly's head are two very large, compound eyes. These compound eyes have many lenses, letting the dragonfly see the slightest movement of other insects in many directions at the same time. The eyes of dragonflies are so large they often touch.

Dragonflies have six specially designed legs covered with spines. When the dragonfly spots its prey, it zooms towards its target. While in flight, the dragonfly holds its legs together forming a basket. With this basket the dragonfly traps its food. The dragonfly is an expert at catching mosquitoes, gnats, flies, bees, ants, and butterflies. Dragonflies are often seen swarming in a feeding frenzy.

When a male dragonfly finds a female, he grabs on to her with special clasp-like holders

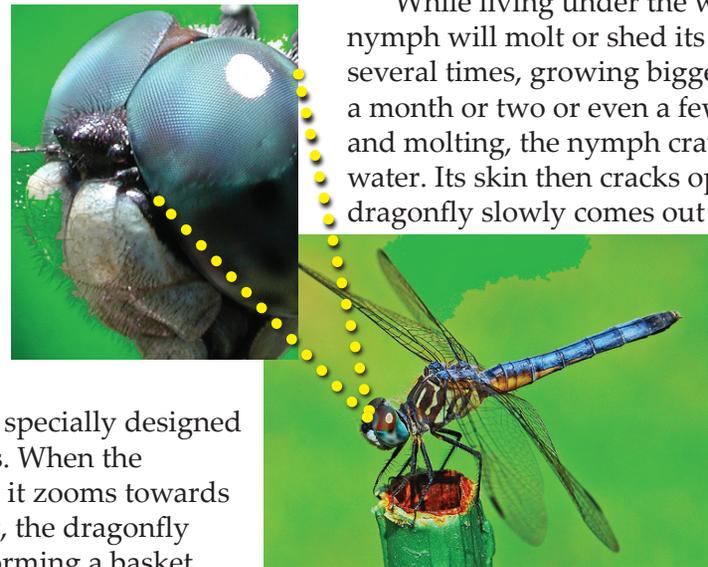
at the end of his abdomen. Held together with these clasps, the two dragonflies mate. Female dragonflies have special needle-like *ovipositors* that she uses to place the fertilized eggs into plant stems above or in water. Some just scatter the eggs over the water.

The tiny dragonfly eggs are not much larger than the period at the end of this sentence. Some eggs hatch in a few weeks; others don't hatch until winter has passed. The eggs that hatch are called *larvae* or *nymphs*. Nymphs spend all their time in water -- on the bottom of ponds or marshes and on underwater plants. The dragonfly nymph looks like a fearsome dragon, moving around underwater hunting for mosquito larvae. With a specially designed lower lip called a *labium*, the dragonfly nymph hooks its prey.

While living under the water, the dragonfly nymph will molt or shed its outer covering several times, growing bigger and bigger. After a month or two or even a few years of growing and molting, the nymph crawls out of the water. Its skin then cracks open and an adult dragonfly slowly comes out of this shell.

its legs harden, the dragonfly pulls itself upright and its body and wings begin to expand and harden. After an hour or more the new adult dragonfly flies off.

Every part and stage of life of the dragonfly looks like it was designed ... design that points to God the Creator. **"Thou art worthy, O Lord, to receive glory and honour and power: for thou hast created all things, and for thy pleasure they are and were created."** Revelation 4:11



All the words in the crossword are found in
THE DAZZLING DRAGONFLY
 (answers at bottom).

ACROSS

- 3 The dragonfly has two pairs of these that they use to fly with.
- 5 The name of the dragonfly nymph's lower lip.
- 7 The dragonflies compound eyes have many _____.
- 9 The dragonfly holds its legs together in the form of a _____, trapping insects for food.
- 10 Another word for a dragonfly's stomach.
- 13 The dragonfly can fly like a supercharged _____.
- 14 The eggs of the dragonfly hatch into _____.
- 15 The male dragonfly holds on to the female dragonfly with specially designed _____.

DOWN

- 1 The dragonfly comes in many colors, including dazzling _____ colors.
- 2 The wings of the dragonfly are given strength with net-like _____.
- 4 The dragonfly legs are covered with these.
- 6 Flying up to 60 miles per hour makes the dragonfly the _____ flying insect.
- 8 Another word for larvae is _____.
- 11 Group of insects dragonflies belong to.
- 12 The nymph of a dragonfly looks like a fearsome _____.

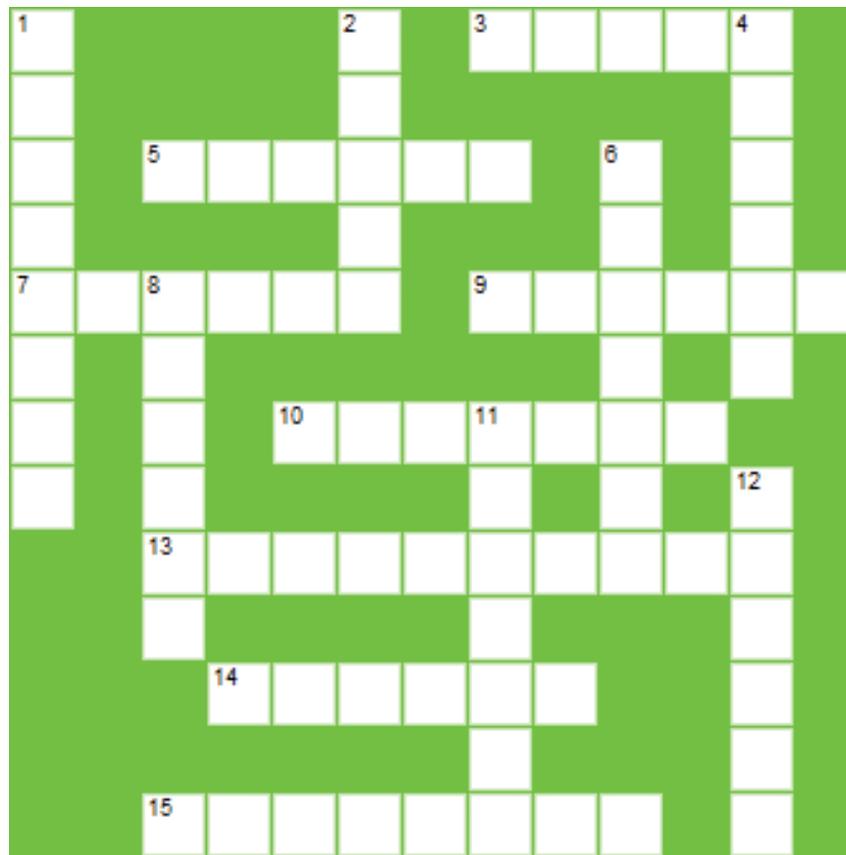


Enormous dragonflies used to live before the Flood.

Their fossils have been found in many places in Europe. On the left is a reconstruction of a fossilized dragonfly with a 2 ½ foot wingspan. Although not as plentiful as they once were, several species of giant dragonflies still survive today, three in Australia, one in Japan, two in North America. In the rainforests of Australia lives a giant dragonfly that has a wingspan of about 50 inches. It has a large thick body that can be as fat as a thumb, and can weigh more than some birds. The adults of this type are not good fliers. At night they roost in trees, and by day they hang from branches or perch on vegetation to feed. The nymphs of the

Australian giant dragonfly live for a very long time and are very slow to grow and mature. At night these nymphs float on top of the water and feed. During the day they live in a burrow with a long tunnel opening above the water. The adult giant dragonflies live for up to ten years. When you add the nymph stage, they may have a lifespan of well over twenty years.

A regular sized dragonfly can carry 15 times its own body weight. If you could train a giant dragonfly, maybe it could carry you around like an air taxi!



ACROSS: 3 Wings, 5 Labium, 7 Lenses, 9 Basket, 10 Abdomen, 13 Helicopter, 14 Larvae, 15 Claspers.
 DOWN: 1 Metallic, 2 Veins, 4 Spines, 6 Fastest, 8 Nymphs, 11 Odonate, 12 Dragon.