

# Kids' Planet... with Thorne Nature Experience



## Dragonflies



by Dr. Oakleigh Thorne, II

**I** like dragonflies! I remember as a little boy how I would watch them darting back and forth over the lake where I grew up on Long Island, New York. Many years later, I used the drawing of the dragonfly shown in the picture as a trademark for our Thorne Natural Science School, which is now just simply called Thorne Summer Camp. This happened ten years ago when we changed our organization's name from Thorne Ecological Institute to Thorne Nature Experience and adopted a new logo. Now my daughter Sarah uses the same dragonfly drawing for her Science Kids program in northern Wyoming.

Dragonflies are insects of the order Odonata. They have four transparent wings with black veins. The wings stick straight out in flight and when they come to rest on a plant of sprig, unlike the more delicate damselflies that fold their wings over their backs when at rest.

Dragonflies are strong flyers. They are also predators, which means they prey on and eat other insects, such as gnats, midges, and mosquitoes. Sometimes they catch and eat larger insects, like butterflies, moths, damselflies, and even smaller

dragonflies. A dragonfly may eat up to a fifth of its body weight in one day. They are efficient hunters so they are able to catch up to 95% of the prey that they chase.

Dragonflies and relative species are an ancient group. Fossils of very large dragonflies have been found that had wingspans up to 30 inches! These lived about 325 million years ago and their fossils are found in Upper Carboniferous rocks. Today there are about 3000 species of dragonflies. Some are brightly colored. Many have brilliant iridescent colors. Most live in the tropics. There are fewer in the temperate zone where Boulder County is located.

In general, the loss of wetland habitats around the world due to human developments have threatened dragonfly populations. Also the use of pesticides can be toxic to dragonflies, especially when they eat other insects that have been sprayed.

Dragonflies have relatively large heads with very short antenna and two amazing

compound eyes made up of many thousand units called ommatidia. They also have three simple eyes called ocelli. They have biting mouthparts that are ideal for catching prey.

The aquatic (underwater) larval stage of the dragonfly is called a nymph or naiad. The nymphs are also voracious predators. They eat almost any living thing smaller than they are, like bloodworms, tadpoles, and small fish. They stay in the nymph stage for several years, living in fresh water. When they eventually come out of the water and have wings, as adults able to fly, they may live only a few days or weeks during which time they mate and lay eggs. When these hatch, they become small nymphs that moult many times as they grow.

Images of dragonflies are often used in jewellery designs. For some Native American tribes, dragonflies are a sign of swiftness and activity. They represent pure water to the Navajo. Their images are used in Hopi

rock art, in Zuni pottery, and Pueblo necklaces.

Find a local pond or swamp where you can observe dragonflies during the summer months. Crestview Elementary School in Boulder has a natural area called Habitat where I often go to watch dragonflies. I usually see three or four different kinds. I hope you will learn to enjoy watching these beautiful creatures as I have.



*Dr. Thorne is founder and president of Thorne Nature Experience (formerly Thorne Ecological Institute) a nonprofit organization headquartered in Boulder. For 65 years they have helped "connect youth to nature!" For information about their programs, please check their website at [www.thornenature.org](http://www.thornenature.org) or email [info@thornenature.org](mailto:info@thornenature.org) or call (303) 499-3647, ext. 100.*

