THE DRAGON-FLY

Cast off skin of dragon-fly nymph, showing shape and position taken on a twig when the adult winged form emerged from the last nymph stage.

What child is there that is not familiar with the insect commonly known as the dragon-fly, snake doctor or snake feeder?

Every lover of the stream or pond has seen these miniature aeroplanes darting now here, now there but ever retracing their airy flight along the water's edge or dipping in a sudden nose dive to skim its very surface.

At times it is seen to rest lazily, wings out-stretched, perched on some projecting reed or other object. But when approached how suddenly it "takes off" and is out of reach. The dragon-fly is an almost perfect model of the modern monoplane.

Its two long wings on either side are the planes, its head the nose, its thorax the fuselage and its long projecting abdomen the tail or rudder. On wing the dragon-fly is one of the swiftest and most powerful insects.

The dragon-flies are found all over the world being most abundant in the warmer regions where rainfall and bodies of water are abundant.

For breeding they require water, their immature stages living under water feeding on aquatic animal life. Our present order of dragon-flies is the remains of an ancient race of insects of immense size. From fossil remains we learn that ancient dragon-flies had a wing expanse of three feet.

The dragon-fly is a beneficial insect throughout life. The young feed on mosquito wigglers and similar life in ponds and streams while the adults dart here and there over ponds, fields or lawn catching mosquitoes and other winged insects.

Many look upon the dragon-fly as a dangerous stinging insect but it is entirely harmless and can be handled without the least danger. They vary greatly in size and appearance.

The so-called damsel-flies form a group of dragon-flies or Odonata which rest with the wings in a vertical position and the young aquatic stages are more slender. In color markings dragon-flies include all hues of the rainbow though as a rule they do not have such extravagant colors as the butterflies.

One of our common dragon-flies found about ponds and streams.

Observations and Field Studies

Go into the fields and study and collect the different kinds of dragon-flies and their young stages from the bottoms of ponds.

How swiftly can they fly?

Do they fly high in the air as well as near the water or surface of the earth?

Can you see them catch other insects?

Do birds catch them and eat them?

Take a position along the edge of a pond and as they come flying by swing swiftly with your net and catch one. Examine it carefully. Note the strength of the long, slender wings with their lace-like network of veins.

Measure the distance across the back from tip to tip of wings. Compare this with the length from tip of head to the tip of the abdomen.

Examine the head with its large compound eyes and the chewing mouth parts. Note the strong thorax which is filled with muscles to operate the wings in flight.

How many segments are there to the abdomen?

With the hands or with a bucket dip up a quantity of mud and trash from the bottom of a pond and pile it on the bank. As the water soaks away watch for signs of life in the mass.

If you find a few small creatures, say half an inch long with large head and eyes, broad body and with six rather long legs they are probably the nymph stages of dragon-flies.

Wash the mud off of them so that you can examine them carefully. With a straw probe in the mouth and you will find that the lower lip is a long elbowed structure which can be suddenly thrown out in front of it and with a pair of pincher-like prongs at the tip it can catch and hold its prey. Some forms keep their bodies covered with mud so that they can slowly creep up close to their prey.

Collect several nymphs and keep them in a jar of water and study their movements and feeding habits.

Disturb one with a pencil or straw and see how it darts forward. It has a water chamber in the large intestines, including also the respiratory tracheal gills, from which the water can be suddenly squirted which throws the insect forward.

The escaping stream of water forces the insect forward on the same principle as the rotating lawn sprinkler. If you collect some almost mature nymphs and keep them for a time in a vessel of water you may see them crawl out of the water, shed their skin and change to winged adults.

What do dragon-flies eat?

In what regions are you most likely to find dragon-flies?