

## Water Features (or Creatures)!

Now that summer is here and it is dry, we think about the cooling effect of water - ponds, streams, rivers and such. There are many insects and their relatives that depend on water for their survival. Without water, this would be a dead planet, but with it, we have an astounding



variety of life. One important insect that is keyed to our ecology is the caddis fly. The adult caddis are food for many fish species, including trout and salmon smolts. Ask a trout fisherman about the flies he uses for fishing, and the word "caddis" will undoubtedly come up. The most interesting of the life history of the caddis are the larvae. They are an aquatic, worm-like critter that builds a house for itself as it grows. Caddis larvae can produce silk like a caterpillar or spider. They use this silk to gather in tiny sticks, sand grains and other bottom debris and build a protective tube around their soft body. Crawling along the bottom of a stream or lake, they become invisible to predators by using this camouflage to conceal themselves.

Stoneflies are another favorite food of fish and other pond creatures. The immature stonefly has a flattened body and the legs project out to the side to give it a very thin profile. Stonefly larvae live under rocks on the bottom of streams and lakes. Being secure under the rock, the stonefly (aptly named, don't you think?) can carry on its life history relatively undisturbed, except for the fish that feeds by overturning rocks for finding prey.

Mosquitoes are a scourge to man and beast, but their life history depends upon water. They don't need much of it, but they need to remain submerged in order to feed as larvae. The larval form feeds on algae and other detritus in shallow, stagnant water. Any water will do, even that left by the imprint of a cow or horse in a pasture as long as it fills with water. The pupa also needs water to remain viable. But, once the adult emerges from the pupa, well, we all know what that means. We are vulnerable!

Not all water creatures are insects, however. In the bottoms of streams and ponds, living in the mud, are other forms of life. Horsehair worms are long, thin roundworms that, as their name implies, are about the diameter and length of the mane hair of a horse. Sometimes they can be seen at the bottom of a clear pool, undulating out of their burrows in the mud while feeding on microscopic life floating in the water. Early observers, looking in their rain barrels and seeing these worms, thought that horsehairs floating in the air had settled in the water and changed into worms.

Certainly, there are a myriad of creatures that depend on water for their existence, we among them. The balance of life on this planet is dependent on a number of factors, but water is the most significant for life as we know it! Have a great growing season, and don't forget to water your plants (and animals)!

