

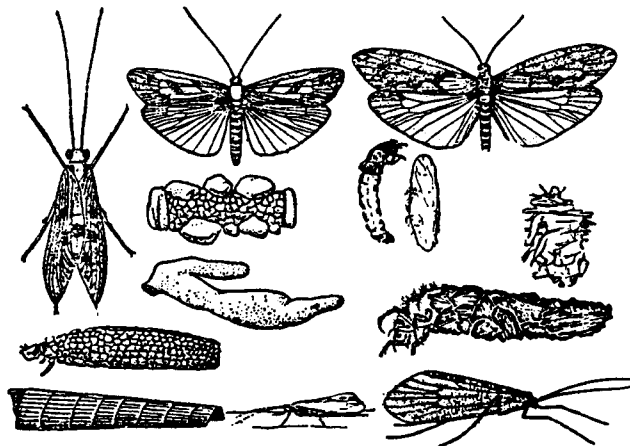
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# Natural History Notes

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## CADDISFLIES



The single largest group of predominantly aquatic insects are the caddisflies. Known primarily for their habit of building portable houses, these soft bodied insects belong to the order *Trichoptera*, meaning hairy wings. Caddisflies are closely related to the moths and butterflies.

There are 1100 species of caddisflies in the United States, over 200 of these occurring in Wisconsin. There is a great difference in size between species, but most average one-eighth to one inch long.

Caddisflies are insects which undergo a complete metamorphosis, meaning there are four forms: egg, larva, pupa and adult. Metamorphosis is from the Greek, meaning "change form." The life span of this insect is about one year with most of the time spent as a larva, pupal stage lasting about two weeks, and one month spent as an adult.

The female lays 300 - 1,000 eggs in a jelly-like mass or string sometimes attached to underwater rocks or plants and sometimes attached to overhanging structures.

Most caddisfly larvae, called caddisworms, live in lakes and streams and have the unusual habit of building portable houses or cases. The small cases are constructed with whatever material the caddisworm has on hand and silk which the larvae produce. The cases are a remarkable variety of shapes and sizes. They may be triangular, round, square, or

nearly flat in cross-section. They may be made of sand grains formed into the shape of a snail shell or bits of wood that looks a little bit like a log cabin. The cases may be compact or loosely built and may be attached to a rock or be truly portable. In these instances the caddisworm crawls about with just its head and neck protruding. Materials used in the construction are leaves, twigs, shells, sand, seeds, grasses and silk produced by the caddisworm. Construction begins soon after hatching. As the larvae grows it adds on to its case or may just build a new one.

The caddisworm is ecologically important. It's a source of food for fish and, especially, makes up a large percentage of the brook trout's diet. The caddisworm is eaten case and all. Fishermen have imitated the adult caddisfly in their dry flies and the larvae in their wet flies.

In turn, the caddisworm feeds on diatoms, algae and some higher forms of plant life. Some species are carnivorous and are important predators of black fly larvae. Some caddisworms construct nets spun of their own silk to trap food.

The caddisfly overwinters in the larval stage and in late spring or early summer enters the pupal stage. Any caddisworm that has not yet made a case now does so, as all species pupate in a case. Approximately two weeks are spent as a pupae and the insect then cuts his way out of the case, swims to the surface and completes the transformation to adult.

The mature caddisfly is not a very colorful animal. Usually some shade of brown or gray, it has long legs, two sets of wings and many long segmented antennae. The hindwings are shorter and broader than the forewings and are held rooflike over the body when at rest.

Caddisworms are found in freshwater lakes, ponds, marshes and streams. The adults are terrestrial and mostly nocturnal. The caddisfly's flight is erratic and rapid. They fly only short distances and so are found mostly near water from May through September. Nectar is the adult's only food, if they eat at all. The caddisfly is an easily overlooked insect, but nonetheless an extremely fascinating one.