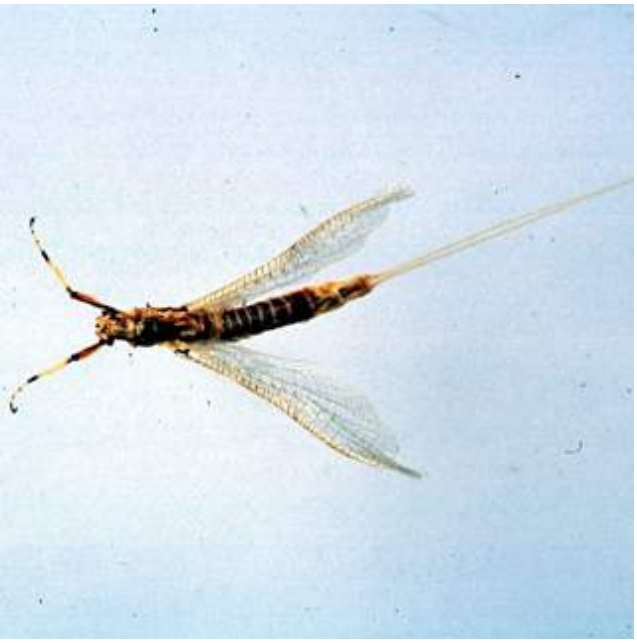

mayfly

representative species

Kingdom:	Animalia
Division/Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera

Features

Mayflies undergo incomplete metamorphosis (egg, nymph, adult). Few changes in structure have occurred in these insects in the past 300 million years, except for a smaller size. The nymph is aquatic and has seven pairs of gills along the abdomen. Two or three long, hairlike projections are present at the tip of the abdomen. One set of wing pads, which look like small wings, is visible on the one-fourth to one inch long nymph. Each nymph has six large, hooked legs and one pair of antennae. The adult has two pairs of long, lacy wings that are folded upright at rest. Some species may be up to 2 1/2 inches long; others range from one to 1 1/2 inches. The front wings are triangular while the hind wings are small and rounded. Mayflies are soft-bodied. The adult's mouthparts are not fully developed and are not used.

Natural History

Mayfly nymphs live in streams, ponds, and lakes under rocks, in silt, or swimming in the water. Adults are found near water. Nymphs eat live and decaying plants and aquatic organisms. The female of most mayfly species deposits eggs on top of the water. Eggs then drift to the bottom. Females of some species crawl under the water and attach eggs to vegetation or other submerged objects. The nymph lives for about one year in the water before transforming to the subimago stage from which it molts into the adult stage. Mayflies are the only insects that must molt once more after reaching the winged stage. Some adults live for only two hours. No adults live longer than three days. Adults do not feed. They mate, lay eggs (if female), and die. There are 75-90 species in Iowa.

Habitats

Mississippi River; Missouri River; interior rivers and streams; natural lakes and prairie marshes; constructed lakes, ponds, and reservoirs

Iowa Status

common; native

Iowa Range

statewide

Bibliography

Iowa Department of Natural Resources. 2001. *Biodiversity of Iowa: Aquatic Habitats* CD-ROM.