

Female Ball Gallmaker

Go out Goldenrod Gall Ball Hunting...

(Say that three times fast)



Early Spring



Growing Season



Larva



Larva in open gall

Search a prairie, field, or edge of a trail to find these galls on goldenrod stems. (2-5' tall)

The Goldenrod Gall Fly is a <u>parasite</u> on goldenrod plants. The fly's entire life, and death, is centered around Goldenrod. This small brown fly is about five millimeters long. Males are slightly smaller than females. Females are easily identified by their <u>ovipositor</u> (egg-laying tube) extending from their <u>abdomen</u>. Adult gall flies do not fly well, so they do most of their travelling by walking up and down goldenrods. The male will choose a <u>bud</u> on the plant and wait until a female shows up. When a female approaches the male does a sort of "dance" to attract her.

After the flies mate, the female leaves to find a suitable spot on the goldenrod to lay eggs. To lay them, she injects her ovipositor into the goldenrod stem. Adult Goldenrod Gall Flies only live about two weeks.

Fly <u>larvae</u> will hatch from the eggs in about 10 days. The larvae will immediately begin to eat from inside the stem of the goldenrod. The <u>saliva</u> of the larvae has a chemical in it which causes the plant to grow abnormally, creating a ball-shaped "gall" that the larvae live in.

The larvae will stay in their galls for a full year before becoming <u>adults</u>. First, they will continue to eat from within, making the gall grow larger, until it is the size of a golf ball. When Fall approaches, the goldenrod stem and gall will turn brown and each larva will dig an escape tunnel to leave its gall, but will not use it until Spring. To prepare for Winter in the gall, the larvae will produce a chemical in their bodies which is similar to anti-freeze. It will keep them from dying from cold weather.

In the Spring, each larva will become a <u>pupa</u> (resting stage) before hatching into an adult. The adult will leave the gall and look for a mate. Adult Goldenrod Gall Flies do not eat.

Goldenrod Gall Flies have many <u>predators</u>, some even when they are in the larval stage in their gall. The gall is like protective armor against most predators, but some locate galls knowing there is a juicy snack inside. Downy Woodpeckers and Carolina Chickadees are two birds who seek out galls and break them to get the larvae out.