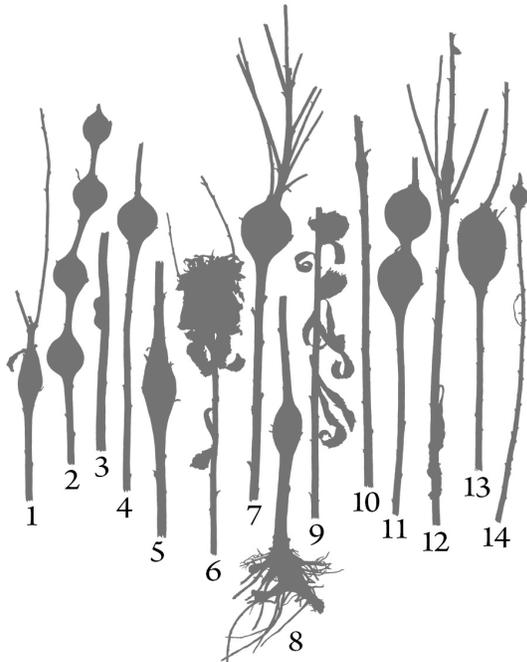


Goldenrod stem galls illustration
by Emily S. Damstra



At least seven different insects cause stem galls on Late Goldenrod (*Solidago altissima*). Some of these galls may also be found on *S. gigantea* and *S. canadensis*.

1. *Gnorimoschema gallaesolidaginis* [Lepidoptera] The bung-filled hole in this specimen indicates that the moth failed to emerge in late summer or fall. These oblong galls occur up to about halfway up the stem, which often branches within a few cm above the gall.
2. *Eurosta solidaginis* [Diptera] An uncommon occurrence of four galls on one stem drew the attention of a chickadee, which messily hacked its way to the fly larvae.
3. *Asteromyia tumifica* [Diptera] Typically found on the side of the stem, these galls are irregular spongy outgrowths that house more than one midge.
4. *Eurosta solidaginis* gall, average size
5. *Gnorimoschema gallaesolidaginis* [Lepidoptera] gall, with characteristic exit hole empty (after the moth emerges)
6. *Rhopalomyia solidaginis* [Diptera] This midge, and possibly other *Rhopalomyia* species, causes an apical rosette (or bunch) gall, significantly altering the form of the goldenrod.
7. *Eurosta solidaginis* [Diptera] The inhabitant of this particularly large gall fell victim to a Downy woodpecker, which drilled a neat hole to access the larva.
8. *Lasioptera solidaginis* [Diptera] These woody galls occur near the base of the stem, some of them right at ground level. They vary in shape; some are spherical. Five exit holes are visible, three of which still hold the midge's protruding pupal cases from the spring emergence.
9. *Procecidochares atra* [Diptera] lateral rosette galls
10. *Epiblema scudderiana* [Lepidoptera] These oblong galls have a woody texture and typically occur high on the stem, sometimes within the inflorescence. They are smaller and more irregular than those of *Gnorimoschema gallaesolidaginis*. The hole in the lower half of the gall is likely a debris hatch. This species emerges in spring.
11. *Eurosta solidaginis* [Diptera] A duo such as this is a fairly common occurrence. In the spring, a parasitoid wasp (*Eurytoma sp.*) exited the gall below and *Eurosta* emerged from the gall above.
12. *Epiblema scudderiana* [Lepidoptera] A 15 mm parasitoid wasp emerged from this gall in spring.
13. *Eurosta solidaginis* [Diptera] A not uncommon oval shape, this gall housed two larvae but only one made it to adulthood.
14. *Eurosta solidaginis* [Diptera] This specimen is perhaps as small as these galls can be while still yielding a fly in the spring (albeit a small fly).