MISSOURI BOTANICAL GARDEN

William T. Kemper Center for Home Gardening

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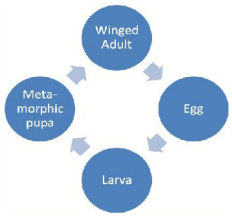
Insect Order ID: Hymenoptera (Sawflies)

Life Cycle–Complete metamorphosis: Adults lay eggs. Larvae (caterpillar-like) eat, grow and molt. This stage is repeated a varying number of times, depending on species, until hormonal changes tell larvae that it is time to pupate. Inside the pupal case, they change in form and color and develop wings. The adults look completely different from the larvae.



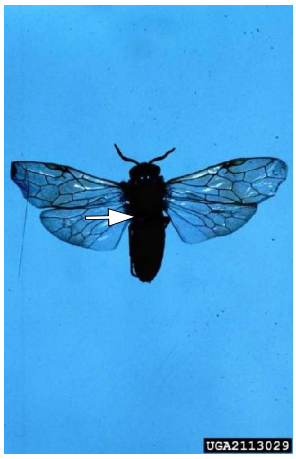
Adults–Sawflies have hard bodies and membranous wings. Their heads are oblong-shaped. Antennae are visible; the antennae of some males are large and feathery. The forewing and hindwing are hooked together as are all Hymenopterans hence the name "married wings," although this is difficult to see. Sawflies look wasp-like, but unlike wasps and other Hymenopterans, all of which have cinched-in waists, sawflies have thick waists or no discernible waist. Females have well-developed, usually saw-shaped ovipositors at the tail end, giving them their common name "sawflies." None have stingers. *(Click images to enlarge or orange text for more information.)*

Some males have feathery antennae

L-M. Nageleisen, Departement de la Sante des Forets, Bugwood.org

Oblong head

L-M. Nageleisen, Departement de la Sante des Forets, Bugwood.org



Lacks a cinched-in waist

P. Kapitola, State Phytosanitary Administration, Bugwood.org

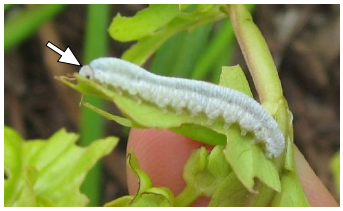
Eggs–Laid in slits in plant tissue cut by adult female's saw-shaped ovipositor, thus the name "sawfly." *(Click images to enlarge or orange text for more information.)*

Eggs inserted in pine needles

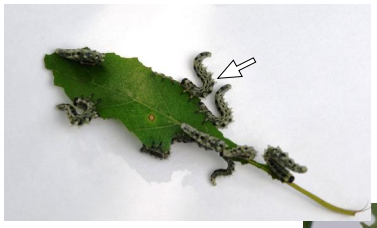
Eggs laid in "sawn" slits in plant tissue

Larvae–All are eruciform (caterpillar-like). None have wings or wingbuds. Unlike butterfly and moth larvae, their eyes are clearly visible, except when the same color as the head. They have 3 pairs of true legs, which may be hairlike, and most have prolegs (thickened protuberances along their abdomens that help them move). Also, they often have a pair of claspers at the tail end. The prolegs are in pairs of 6 or more; the claspers at the tail end, if present, always count as a pair of prolegs. (Fewer than 6 pairs of prolegs indicates a moth or butterfly larvae in the order Lepidoptera.) Larvae also have characteristic defensive posture in which all the larvae in the colony rear up simultaneously. *(Click images to enlarge or orange text for more information.)*

Caterpillar-like

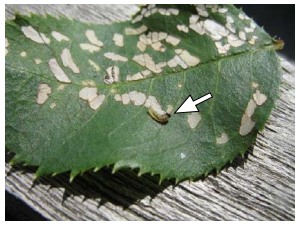


Distinct eye in distinct head



Defensive posture

Rearing up in unison



Slug sawflies are clear and hard to see

At least enough pairs of prolegs to spell "SAWFLY"

6 or more pairs of prolegs

3 pairs of true legs

Pupae–All have a pupal stage, during which the adult, winged form develops. Many pupate within a silken cocoon in the soil. Some, e.g., dogwood sawflies, burrow into decaying logs or into wood siding, which can be further damaged by hungry woodpeckers hunting them.

Beneficial/Benign Aspects–Adults feed on pollen or nectar and are pollinators. The larvae of some species are predators or parasitoids of garden pests.

Damage–Both adults and larvae have chewing mouthparts. No species has a stinger. Aside from ovipositor damage, the damage to plants is done by the larvae. They chew holes in leaves, needles, and stems, and often feed in large groups that defoliate the host plant. *(Click images to enlarge or orange text for more information.)*

Skeletonizers

Defoliators

Leaf chewers

Needle chewers

Rose slugs are sawfly larvae

Slug sawflies often feed in a group

Leaf chewers

Comments–Sawflies are classified in the order Hymenoptera, Suborder Symphyta.

Sawfly larvae are often confused with the larvae of butterflies and moths in the order Lepidoptera. Some Lepidopterans also display a similar defensive posture (rearing up) when disturbed as do sawfly larva; e.g., yellow-necked caterpillars and other species of *Datana*.

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