

# Bugs & Blights

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## Windows in rose leaves ...

...can be caused by larvae of flea or leaf-beetles or by three species of sawfly, often called rose slugs. (Another common name gone wrong as these are insects and not slugs, and they are not slimy. Young larvae feed on the tissue between veins. As they grow they can feed on the tougher veins, but not the midrib. Each is different in look, causes slightly different damage and they have different life cycles. IPM options and, if needed, pesticides for homeowners are listed by brand name in Hortsense, <http://pep.wsu.edu/hortsense/>. They are also listed in the landscape section of the PNW Insect Management Handbook hardcopy. <http://oregonstate.edu/dept/nurspest/roseslug.htm>

Since these are not the caterpillars that turn into moths, *Bacillus thuringiensis* (Bt) will not be effective on these larvae. By the time sawfly damage is noticed, the larvae have dropped to the soil to pupate. Occasionally, they can build up and completely skeletonize all leaves, therefore be vigilant. Pesticides are not effective if the larvae are not present. For sawflies with multiple generations, watch for new activity.



**Rose slug, *Endelomyia aethiops***, feeds on the green tissue, leaving the epidermis and tougher veins. Tissue eventually dries. Larvae are dull in color and only one generation a year is reported.



**Bristly rose slug, *Cladius difformis***, has distinct hair (see area of hole in photo) and several generations in a year. Note hairs visible near the head. Larvae look somewhat "glassy".



**Curled rose slug, *Allantus cinctus***, is often on the underside of the leaf in a curled position. Larvae skeletonize leaves. Two generations per year are reported. All three rose slugs are common on native wild roses as well as garden roses.



**Leaf beetles.** Black first instar leaf beetle larvae on native rose. Note the little scraped area around the empty eggshells. The leaf will be scraped until only the veins and epidermis are left. White eggshells, row of black larvae and black specks are frass (beetle poo).



**Pear leaf roll midge.** This insect is similar to the other leafcurling midges on apple or maple. Females lays eggs on young unfolded leaves of new growth. Feeding by the larvae causes the leaf edges to swell protecting the larvae inside. Leaves may eventually turn black and abort. Larvae drop from leaves to pupate in the soil then emerge as tiny flies to lay more eggs. Four overlapping

generations are reported. Damage is considered to be insignificant on large trees but may be a problem on small trees where growth is more desirable. <http://jenny.tfrec.wsu.edu/opm/displaySpecies.php?pn=650>