UT Extension
SP 290-Q
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Insects

Boxwood Leafminer

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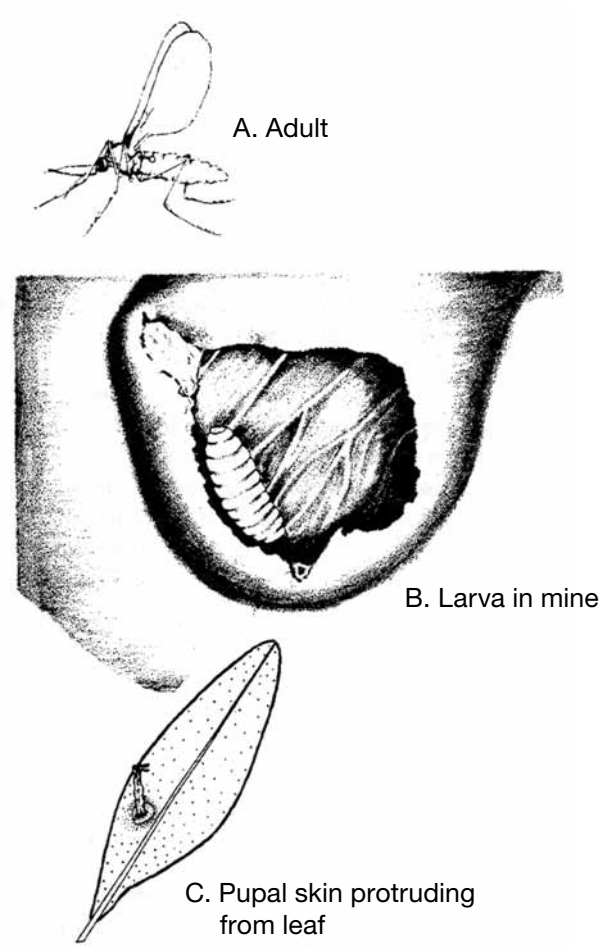
Boxwoods were brought into the United States in the 1800s. With the introduction of this plant came the boxwood leafminer, *Monarthropalpus flavus (=buxi) Schrank*.

The boxwood leafminer is considered to be the most serious pest of boxwoods. It occurs from the Atlantic to the Pacific, wherever boxwoods grow. All varieties of the boxwoods are attacked; however, the slower-growing English varieties are less susceptible than the American varieties.

This pest mines in the foliage by feeding between the upper and lower leaf surfaces. Mining activity results in the formation of small blisters on the undersides of the leaves. Infested leaves become yellowish and are smaller than uninfested leaves. Heavily damaged plants become unthrifty in appearance. The adult leafminer is a yellow-to-orange-red fly that resembles a mosquito. Adults are usually seen swarming around boxwoods about the time weigelas bloom. The larva is a small (1/8 inch long), legless, lemon-yellow maggot.

The boxwood leafminer overwinters as a partially grown larva in the leaf blisters. When the weather warms up in the spring, the larva becomes active, grows rapidly, then pupates. The pupa darkens prior to adult emergence. At adult emergence, the pupal skin is forced partly out of the mine, where it hangs for several days after the fly emerges. Adults appear for about a two-week period after boxwoods put on new

Boxwood leafminer



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growth in the spring. Females soon begin inserting eggs into leaves. Eggs hatch in about three weeks.

Larvae begin their mining activity in the leaves. Infested leaves may have yellow spots and drop prematurely. Blistered leaves are seen from midsummer until the following spring. Serious infestations result in dead twigs or may weaken the plant, making it susceptible to disease or winter damage.

Control Measures

For chemical control recommendations refer to: https://tiny.utk.edu/ag/insectandmite.

Always refer to the insecticide label to make sure that the insecticide can be legally applied on ornamental plants at your site, such as residential landscape or commercial nursery.

In February to early April, recommended insecticides containing imidacloprid can be applied as a coarse spray or drench to the soil around the shrubs. In late March to early April, dinotefuran insecticides such as Safari can be applied to the soil. Pull back any mulch prior to application to ensure direct contact of insecticide with the soil. Place the mulch back around the base of the plants after treatment. These systemic insecticides will be active against the new leafminer larvae occurring in May.

In April, or about the time weigelas bloom, look for the pupal skins protruding from the underside of the leaves and the adult boxwood leafminer flies inserting eggs into the leaves. Treat the adults with recommended insecticides at this time.

If a systemic soil applied insecticide was not used, a foliar spray of one of the recommended systemic insecticides can be used to control larvae developing in the new leaves.

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