

Arborvitae Leafminer

Argyresthia thuiella(Packard), Yponomeutidae, LEPIDOPTERA

DESCRIPTION

Adult -The adult is a small (about 6-mm-long), light gray (with brown and black spots) moth with a wingspread of about 8 mm. The antennae are long and slender. The legs and abdomen are light brown (Color Plate 1A).

Egg-The egg is tiny (0.4 mm by 0.25 mm) and almond shaped with wrinkled sculpturing on one end. It is pinkish but turns darker as the embryo matures.

Larva-The larva is a small (0.75- to 3-mm), green (sometimes with a reddish tinge) or brownish caterpillar with a black head and cervical shield.

Pupa-The 3.5- to 4-mm-long pupa is greenish but turns brownish red as it matures. The tail segment has a group of six to eight short, stout hooks (the cremaster).

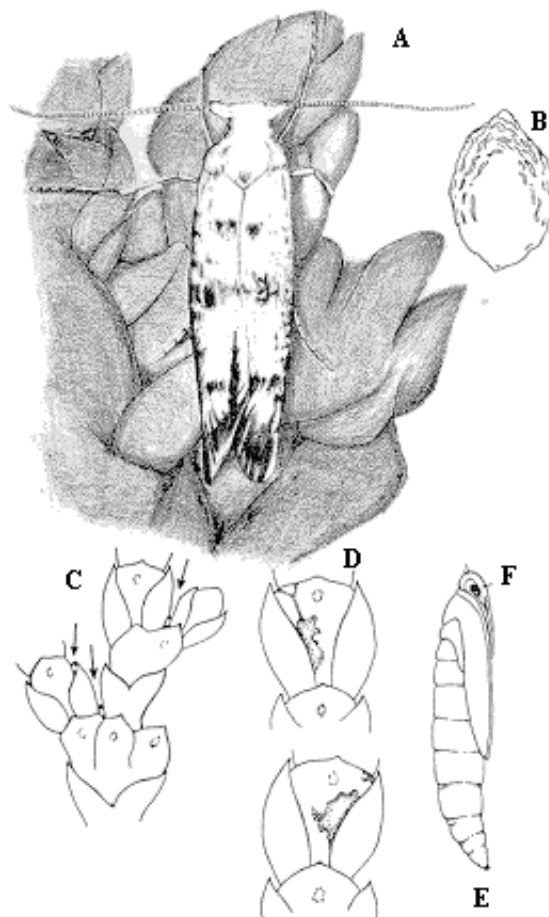
BIOLOGY

Distribution -The arborvitae leafminer is known from New England and eastern Canada south to the Middle Atlantic states and west to Missouri.

Host Plants -The arborvitae leafminer apparently confines its feeding to all varieties of arborvitae but seems to prefer American pyramidal, globe, and golden arborvitae (about in that order).

Damage -Mined leaves detract from the appearance of infested arborvitae (Color Plate 1A). Heavily damaged leaves may drop from the plant prematurely, and in extreme cases the plant may be killed.

Life History -Arborvitae leafminers overwinter as larvae in the mined leaves. Pupation occurs and adults appear in late spring and throughout the summer. After 2 or 3 days, females deposit eggs in the axils of branchlets or along leaf margins. A female may oviposit for 4 or 5 weeks. Most of the eggs are laid around the first of June. Newly hatched larvae bore into the leaves and feed for the rest of the season. The larvae mine from the tips of branchlets toward the bases and allow the frass to collect in the tunnels until winter. When mining is



Arborvitae leafminer. A, Adult. B, Egg. C, Egg placement. D, Early damage. E, Damage (arrow). F, Pupa.

resumed the following spring, the frass is expelled from the mine. Larvae will sometimes leave old mines and begin new ones. Pupation occurs in the new portion of the mine after an exit hole has been chewed and takes place from March to May. The pupal stadium is 3 to 5 weeks. Pupae face the exit hole.

CONTROL

Some control may be obtained by pruning out infested tips in the fall. Hymenopterous parasites also help control the population. If a spray is used, it should be applied in early June or late May. For specific chemical controls, see the current state extension service recommendations.

[Return to AG-189 Table of Contents](#)