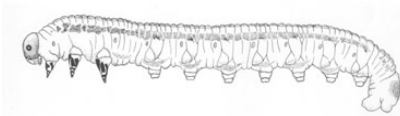


VIRGINIA PINE SAWFLY

Hymenoptera: Diprionidae: *Neodiprion pratti* (Dyer)

by Eric Day and Scott Salom



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Fig. 1: Virginia Pine Sawfly, larva sketch
[R Blackburn, Smithsonian Institution,
Bugwood.org]

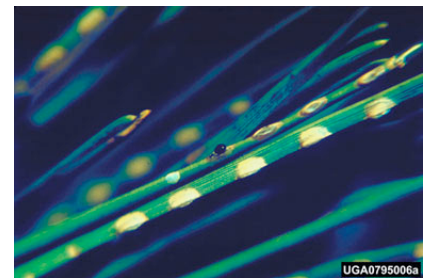
DISTRIBUTION AND HOSTS: The Virginia pine sawfly has been recorded from New Jersey and Maryland to North Carolina and westward to Illinois. Its main hosts are Virginia and shortleaf pines, but it also feeds on pitch and loblolly pine.

DESCRIPTION OF DAMAGE: Not considered an important defoliator pest until an outbreak in Maryland, Virginia, and North Carolina in the late 1950's swept over more than 5.6 million hectares of pine and pine-hardwood forest type. Tree mortality was only scattered, yet growth loss was severe. Heavy defoliation for two or more years can weaken trees and make them more susceptible to other mortality agents. Early instar larvae feed on the

outer portion of needles. After the first two instars, larvae consume entire needles except for the basal portion within the sheath. Larvae may also feed on portions of developing buds and on tender bark of twigs.

IDENTIFICATION: Adults resemble flies yet have four wings instead of two. Small white oval eggs are inserted into the edge of needles at equally spaced intervals, but in only one needle fascicle. Newly hatched larvae are pale green, with black head capsules, and are 3 mm long. Full grown larvae are spotted or marked with longitudinal black stripes and are from 16 to 23 mm long. Cocoons for pupation are spun in the litter or soil surface under the trees.

LIFE HISTORY: Winter is spent in the egg stage and hatching occurs in early spring. Newly hatched larvae feed gregariously on the previous year's needles, beginning about 10 to 15 mm below the tip. Larval development is usually completed by the time new needles come out, giving heavily defoliated trees a tufted appearance. Mature larvae crawl to the ground in mid- May and spin their cocoons where they remain as prepupae until September when they pupate. Adults appear in October and November.



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Fig. 2: Virginia Pine Sawfly eggs in
pine needles
[C L Morris, VA Dept of Forestry,
Bugwood.org]



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Fig. 3: Damage to pine needles
[USDA Forest Service - Ashville Archive,
USDA Forest Service, Bugwood.org]

CONTROL: White-footed mice and ants destroy large numbers of cocoons and pre-pupae in heavy infestations. An ichneumonid, *Exenterus nigrifrons* Rowher is an effective parasitoid of pre-pupae before they spin cocoons. An introduced parasitoid, *Dahlbominus fuscipennis* (Zelterstedt), has been released and established in infested stands in Virginia. A native polyhedrosis virus has destroyed up to 70 percent of sawfly larvae when applied from an airplane.

Several chemicals have proven effective in preventing damage to ornamentals, consult the most recent version of the Pest Management Guide for horticultural and forest crops, Virginia Cooperative Extension Publication 456-017.