

By
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Management Guide for Gouty Pitch Midge

Cecidomyia piniinopis Osten Sacken
(Diptera: Cecidomyiidae)

In the West on it's principal host, ponderosa pine, it is known as the bird's-eye pine midge (although it does not cause the "bird's-eye" figure in pine lumber) or ponderosa pine resin midge.

Hosts:

- **Pines (Pinus spp.)**
(Particularly Ponderosa pine)

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Damage

Midge larvae feed under the bark of shoots, in small resin filled pockets.

Light infestations may cause little damage or minor distortion of the bark around the pitch pocket.

Heavy infestations can girdle and kill the terminals. Evidence of dieback progresses throughout the summer and by late summer needles or entire terminals may be killed.

Damage first noticeable in early summer when the new shoots fade, droop, and gradually turn yellow and die. On some trees nearly every new shoot is affected.

If there are not enough pockets to kill the terminal, the injury heals over but for many years the annual rings are distorted into a peculiar whorl until the pocket is completely covered.

Severe attacks retard tree growth and repeated attacks sometimes kill trees. Young trees are particularly susceptible.

Attacks are heaviest on trees with sticky twigs and lightest on trees with dry, powdery twigs.

Key Points

- It attacks only the current year's shoots.
- Young trees are particularly susceptible.
- Wounds caused by gouty pitch midge may later be attractive to other insects, such as the pinyon pitch mass borer.

Life History

This insect occurs from coast to coast. In California, Oregon, Washington, Idaho, and Montana it commonly infests young, open grown pines, especially in plantations.

The larvae spends the winter within pitch pockets on the bark of twigs. In the spring they move to the base of needles and spin a cocoon in which they pupate.

Adult midges emerge in spring shortly after the new shoots have emerged. Adults are small, delicate

flies- typical midges. Adults mate and females lay eggs on the surface of the shoot.

Eggs hatch and newly hatched larvae first tunnel into resin droplets that form at the base of the needles and later migrate to resin pockets in the bark for further development.

The gouty pitch midge has one generation per year.

Populations fluctuate widely from year to year due to natural control.

Identification

The gouty pitch midge has one generation per year.

Signs of Attack—Needles on infested shoots die in tufts which soon droop, turn yellow and later reddish-brown. These flags are scattered over part or all of the crown and appear by summer.

Extensive twig killing, stunted or distorted growth, and sparse, off-color foliage are symptoms of persistent, heavy infestations.

Infested shoots will have slight swellings on their surface. When the bark is removed, infested tips will be pitted with small, resinous

pockets with bright red to orange red maggots, often found in groups, within pockets of pitch on twigs or small branches.



Infested shoots with gouty pitch midge larvae. Photo by: Scott Tunnock

Management Considerations

Controls have not been developed. Populations fluctuate greatly under normal conditions due to natural controls. There is also great variability in genetic susceptibility to this insect among individual pines.

Other Reading

Cranshaw, W, D. Leatherman, and B. Kondratieff. 1993. Insects that Feed on Colorado Trees and Shrubs. Colorado State University Cooperative Extension Bulletin 506. Pg.. 71.

Eaton, C.B. and J.S. Yuill. 1971. Gouty pitch midge. USDA Forest Service Forest Pest Leaflet #46. 8pp.

Furniss, R.L. and V.M. Carolin. 1977. Western Forest Insects. US Department of Agriculture Forest Service. Miscellaneous Publication No. 1339. Ppg. 415-416.

Web References:

http://www.for.gov.bc.ca/hfp/publications/00198/gouty_pitch_midge.htm

Forest Health Protection and State Forestry Organizations

Assistance on State And Private Lands

Montana: (406) 542-4300

Idaho: (208) 769-1525

Utah: (801) 538-5211

Nevada: (775) 684-2513

Wyoming: (307) 777-5659

N.Dakota: (701) 228-5422

Assistance on Federal Lands

US Forest Service
Region One

Missoula: (406) 329-3605
Coeur d'Alene: (208) 765-7342

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