From the Editor

Earlier in the summer, I noticed pine spittlebug on the trees in our yard. I thought it might be time to present a bit more information on these insects that can cause and spread a couple of types of damage.

After we received questions on something damaging leaves on beech, Gina Penny wrote an article on the culprit.

Terry White has been working on the spruce beetle project. He would like your help in locating new sample plots.

And Jeff got bitten by a brown prionid. It’s been a busy couple of months.

‘Til next time,

Jacqui

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Say What and Quotes

Always forgive your enemies - Nothing annoys them so much.

When everything’s coming your way, you’re in the wrong lane.

If everything seems to be going well, you have obviously overlooked something.

Everyone makes mistakes. The trick is to make mistakes when nobody is looking.

When I’m not in my right mind, my left mind gets pretty crowded.

Evening news is where they begin with “Good evening” and then proceed to tell you why it isn’t.

If you can’t see the bright side of life, polish the dull side.

There’s no such thing as fun for the whole family.

~J. Seinfeld
Insect Focus

Pine Spittlebug
compiled by Jacqui Gordon

Introduction
You may have noticed masses of what looks like spit on pine in May and June. A closer look and you’ll find this somewhat revolting mass is the hiding place of the immature stage of the pine spittlebug. This insect is in the order Homoptera with leafhoppers, cicadas, and aphids. It feeds on sap.

The froth serves a number of purposes. It hides the nymph from the view of predators and parasites, it insulates against heat and cold, and prevents the nymph from drying out.

Hosts
As its name indicates, it has a fondness for pine: eastern white pine, Scots pine, and Jack pine. It will also feed on: balsam fir, hemlocks, larches, and spruces.

Life Cycle
The adult females lay eggs on the dead branches or just under the bark of twigs during the months of July and August. These eggs overwinter and the nymphs (immature stage) hatch in May. The nymphs pierce the bark of the twig and feed on the sap. Feeding provides nutrition and allows them to produce the frothy spittle they use for protection and shelter. As they approach the adult stage, they gradually move closer to the stem of the tree: forming new masses of spittle at each stop. By July, the nymphs are mature and change into winged adults. These adults mate and lay the overwintering eggs.
Damage

Pine spittlebug damage can be a problem, especially in young eastern white pine plantations. The feeding punctures produce needle browning at branch tips (flagging), and can result in twig and branch mortality. Two or three years of very heavy infestation can result in tree mortality. Any age or size tree can be attacked.

The pine spittlebug can carry a fungus that invades a tree through the insects feeding punctures. This fungus, called Diplodia pini, can weaken the affected tree. Most of the flagging injury attributed to the pine spittlebug is due to the fungus rather than the insect. Controlling the insect however will control the fungal infection.

Feeding injury caused by the pine spittlebug also allows sooty mold to invade the tree. This too may cause flagging and eventually the tip of the affected twig will die.

Control

Damage and infestations may be reduced by silvicultural tree practices that maintain tree vigor, such as properly timed thinning; and reduction of egg-laying sites such as removal of dead or dying branches and trees. Chemical controls are also available.

There is a fungus that infects the nymphs, keeping populations in check. The fungus, coupled with high temperatures during the nymphal stage, can cause heavy mortality of the pine spittlebug.

References


What do you call a cheerful flea
A hop-timist!

The roundest knight at king Arthur’s round table was Sir Cumference.

I’m reading a book about anti-gravity. It’s impossible to put down.
**Leaf-Mining Beetles - A Day at the Beech**

Leafminers are insects that tunnel or “mine” between the upper and lower surfaces of a leaf, feeding on the soft tissues in between. Immature stages of many different groups of insects share this feeding habit, including the larvae of various flies, small moths, beetles and sawflies.

The mining pattern formed as the larvae feeds can often be diagnostic for which kind of insect has caused the damage. Serpentine mines, consist of thin, winding trails, across the leaf’s surface, increasing in width as the insect grows. Blotch mines, are irregular but generally round in shape. A subgroup of these is the tentiform leaf mines, bulging blotchlike mines that curve upwards like a tent as the damaged leaf tissue dries.

Early this summer we received many phone calls and samples of damaged beech leaves. At first glance the leaves looked like they may have been infected with some sort of disease but on closer inspection it was obvious that the culprit was the larva of a leaf mining weevil.

The adults are tiny (2-3 mm long), dark weevils with enlarged hind femurs - top portion of the leg. When disturbed, they jump and fly, earning them their alias of flea weevils. Adults feed on leaves resulting in circular holes while the larvae make small irregular blotch mines in them. Heavy infestations cause the leaves to turn brown, giving trees a scorched appearance. Twigs are sometimes killed as a result of overfeeding.

Adult weevils overwinter under loose bark or in ground litter. They emerge in the spring feeding first on developing buds and then on the underside of the leaves of various hardwood trees. Females lay their eggs on the underside of the leaves. The eggs hatch approximately two weeks later and the larvae immediately begin to mine the leaves. After several weeks of feeding the larvae pupate in the mined leaves with new adult weevils emerging in late summer. These new adults will feed on the leaves until they go into hibernation.

The best time to attempt control is in the spring when the adult beetles emerge and begin to feed on the expanding buds. Even then it is difficult to control this pest.

**References**


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The Egg Carton method:  
To know Egg-zactly what they are!!
Keith Moore

There are many ways to bring samples into our lab: some come in bottles, bags, cans, and envelopes, but an egg carton is probably one of the most unique ways to package them.

In this case we only needed the terminal shoots; which were fragile and newly flushed. There were eight different areas and the grower had them all labeled on the lid where they came from. Let's just say, the sample wasn't scrambled!!

Gypsy Moth and BSLB Traps
Jacqui Gordon

Just a reminder to Pest Detection Officers: gypsy moth and BSLB traps can be brought in after 15 September.

Gypsy Moth - If you’re sure of the identification, just count ’em up and send in the locations and trap catch numbers. If not, send us the catch or the trap and catch in the case of the delta traps.

BSLB - Send in the catches as you have been doing. Please clean the catch buckets and store the traps for next year.

We appreciate your help with these surveys.

The Brown Prionid
Jacqui Gordon

At least two of these longhorned beetles have crossed the identification desk this season. As its name suggests it is a large brown beetle, in fact the longest beetle we have in NS. Its larvae feed on decaying trees and logs.

One of these specimens arrived alive at our office. As Jeff Ogden identified it, he held it to point out features to the client. The most common question regarding any insect is “Is it dangerous?” To this Jeff replied, “No, although it chews wood so the mandibles can pinch.” And pinch it did, right on cue. It sunk those two little mandibles into the tip of his finger and even drew a tiny bit of blood.

So often our most commonly used insect quote comes from Lloyd Coady (retired - CFS), “Nothing like an insect to make a liar out of you.” Apparently this brown prionid was not going to make a liar out of anyone.
**Project Update**

**Help us Track the Spruce Beetle**  
Terry White

In the fall of 2003, Hurricane Juan cut a swath through Nova Scotia's forests. In 2004, Forest Health staff established 18 permanent sample plots (PSP’s) in spruce stands within the Hurricane Juan damaged area. This survey was designed to monitor and track the spread of spruce beetle in these stands. Forest mensuration measurements have been taken yearly since 2004: tree heights, tree diameters as well as a damage rating for the amount of spruce beetle attack in each tree.

This year we want to expand the survey by establishing Permanent Sample Plots province wide so that we are also tracking spruce beetle elsewhere in the province.

**Signs and symptoms of spruce beetle attack** . . .

- Holes in the bark on the main stem of spruce trees. These holes are about 1mm in diameter and may have sap dripping from them.
- Blobs of dried sap or pitch (commonly called pitch tubes) partially covering the holes. If the tree is weak from numerous attacks, little or no sap may be visible and the entrance holes will be easy to see.
- Reddish-brown boring dust (like sawdust) visible on the bark and base of trees.
- Foliage on spruce trees turn yellow then reddish-brown by late summer. This usually occurs 1 or 2 years after the tree is first successfully attacked.
- Outer bark of trees flaked off or missing from the standing tree. This is caused by woodpecker feeding activity as they search for adults and larvae.

We would like to give our newsletter readers around the province the opportunity to help us in expanding the plots by submitting candidate spruce stands, preferably mature white spruce with no current signs or symptoms of spruce beetle attack.

If you know of a stand that would be a good addition to the survey, please contact me at (902) 758-7098 or whitety@gov.ns.ca
The Last Laugh . . .

A Good Pun Is Its Own Re-word:
- What do you call a country where everyone drives a red car? A red carnation.
- A pessimist's blood type is always b-negative.
- Every morning is the dawn of a new error.
- Does the name Pavlov ring a bell?
- A successful diet is the triumph of mind over platter.
- Bakers trade bread recipes on a knead-to-know basis.
- Santa's helpers are subordinate clauses.
- Did you know that William Tell and his family were avid bowlers? Yes, it's true. But, unfortunately, all the bowling league records were destroyed in a fire, so we will never know for whom the Tells bowled.

A man was giving a speech at his lodge meeting. He got a bit carried away and talked for more than two hours. Finally, he realized what he was doing. "I'm sorry I talked so long," he said. "I left my watch at home."

A voice from the back of the room said, "There's a calendar right behind you."

Every weekday morning for years, at about 11:30 a.m., the telephone operator in a small town received a call from a man asking for the exact time.

One day the operator got up the nerve to ask him why he called so often. "I'm foreman of the local sawmill," the man explained. "Every day I have to blow the whistle exactly at noon, so I call you to get the correct time."

"That's funny," the operator giggled. "All these years, we've been setting our clock by your whistle."

A man's car stalled on a country road one morning. When the man got out to fix it, a cow came along and stopped beside him. "Your trouble is probably in the carburetor," said the cow.

Startled, the man jumped back and ran down the road until he met a farmer. The amazed man told the farmer his story.

"Was it a large red cow with a brown spot over the right eye?" asked the farmer.
"Yes, yes," the man replied.
"Oh! I wouldn't listen to Bessie," said the farmer. "She doesn't know a thing about cars."