



TARY
Insectary

NS Dept. of Natural Resources
Forest Health

Insectary Notes

August / September 2013

From the Editor

Forest Health is busy preparing to start its' overwintering surveys. We will be collecting and processing samples to check on the populations of spruce budworm, balsam fir sawfly, blackheaded budworm, jack pine budworm, and whitemarked tussock moth. Glad to see that Brandon Oikle and Rob Davis have returned to Forest Health to help with all these projects, Welcome Back!

In this issue we thought it was time to give a bit more information on the maple trumpet skeletonizer. This insect has increased in numbers over the last couple of years and is currently showing up in sugar maple in Cumberland Co.

'Til next time,

Jacqui

Editing . . . a Rewording Activity

Say What? And Quote Quips!

Life is a pretty cheesy game, but at least it has good graphics. -Anon.

I consider myself a crayon, I might not be your favorite colour but one day you'll need me to complete your picture. -Anon.

Math is fun, it teaches you life and death information, like when you're cold, you should go to a corner since it's 90 degrees there. -Anon.

On cable TV they have a weather channel - 24 hours of weather. We had something like that where I grew up. We called it a window. -D. Spencer



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A black cat crossing your path signifies that the animal is going somewhere. -G. Marx

There's no time like the present. But a couple of minutes ago probably bore a "striking" similarity. -Unk.

Groaners . . .

I'm reading a book about anti-gravity. It's impossible to put down.

I relish the fact that you've mustard the strength to ketchup to me.

Insect Focus

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Maple Trumpet Skeletonizer *Epinotia aceriella* (Clemens)

Jacqui Gordon

This fall, I noticed the damage from the maple trumpet skeletonizer (MTS) on the red maple in my yard. It is the third year that the insect has skeletonized and folded the leaves. Forest Health also received a report of damage to sugar maples in Cumberland County, particularly in the Lynn Mountain area.

Hosts

The larvae of the maple trumpet skeletonizer feed primarily on the leaves of sugar and red maple. They have also been noted to feed infrequently on hawthorn and beech.



That's an awfully long name for a tiny little bug.

Maple: it's most common host

Trumpet: the shape of the tube the larva makes

Skeletonizer: the larva feeds on the tissue between the veins of the leaf

Life History

Although the damage is more easily seen in late August and September, the larvae begin to feed in early July. It can be difficult to notice them at first because they feed on the



Fig. 1 A leaf skeletonized and folded by MTS, Sept. 2013.

underside of the leaves between two major veins. The larvae are small (at maturity they are about 1.25 cm long) and light green to cream in colour. They feed individually and each larva constructs a trumpet-shaped tube from its droppings and silk. There can be two larvae creating two trumpets and two folds on one leaf. This tube is used to protect the larva from predators and as shelter. The silk is also what folds the leaf together providing the larva with even more protection. It leaves the tube to feed and then returns to continue building and rest.

In the late summer and early fall when the larvae are full grown, they drop to the ground where they construct a cocoon between two leaves. In June and early July the adult moths

emerge to lay eggs. The moth is mottled grey and black with a wingspan of approximately 1.5 cm.



Fig. 2 The "trumpet" created by the MTS larva, Oct. 2012.



So why is the tube made by the larva shaped like a trumpet?

The larva starts to build the tube when it is very small so the beginning of the tube is narrow. As it grows, the tube naturally becomes wider to accommodate the size of the larva.

Damage

The larval feeding skeletonizes starting from the underside. The patches turn brown and the leaves fold where the trumpet tubes are. The leaves look unsightly, drooped, and ragged.

Since the damage occurs late in the year, the overall damage to the tree is usually of little consequence. Trees that are under stress from other insects, disease, or environmental factors may sustain more damage than healthy trees.



Fig. 3 MTS damage, Sept. 2013.

Control

We can add this little creature to the list of reasons to rake the leaves up in the fall. To lessen the overwintering population, rake and destroy the leaves. This will not provide complete control but will reduce the number of adult moths laying eggs in the spring.

References

Miller, H.C., Fladd, F.W., and Klass, C. 1986. Maple Trumpet Skeletonizer. Cornell Cooperative Extension. <http://counties.cce.cornell.edu/chemung/agriculture/publications/maple-trumpet-skeletonizer.pdf>

Barlow, V. 2006. Maple Trumpet Skeletonizer. Northern Woodlands Magazine http://northernwoodlands.org/articles/article/maple_trumpet_skeletonizer

And more reasons to rake and destroy the leaves . . .



Fig. 4 Large tar spot of maple.



Fig. 5 Leaf blotch of horse chestnut.



Fig. 6 Ash rust.



Provincial Forest Entomologist's Overview

..... What's the Buzz?

Gina Penny

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You might be surprised to learn that it's not only wildland firefighters who find forest fires intriguing. Many insect species are also attracted to fire-damaged trees and forests. Swarming insects are often reported by firefighters during the fire and "mop-up" operations. These insects are collectively termed "fire bugs."

Bark beetles of the subfamily Scolytinae and wood borers of the families Buprestidae (metallic wood-boring beetles) and Cerambycidae (longhorn beetles) are frequently associated with tree mortality following fire. Bark beetles (e.g. spruce beetle - *Dendroctonus rufipennis*) are opportunistic, colonizing fire-scarred trees that still have a viable inner bark. These beetles accelerate tree mortality and can kill trees not already killed by the fire. There is the potential for populations to build in fire-damaged trees and then spread into healthy forests. These insects do not enter the sap wood and can be identified by their distinctive gallery (tunnel) systems under the bark.

The woodborers attack severely stressed or recently killed trees. Each of these insects has its own "signature" on the host tree and is attracted to a specific amount of fire damage. Woodborers develop inside damaged trees and emerge one to several years after their eggs are laid. The sound of their large, white larvae chewing on wood under the bark is a common sound the year after a stand has been killed by a wildfire.

Many wood borers use smoke as a pathway to recently-damaged or killed trees. However, beetles of the genus *Melanophila* (Family Buprestidae) take it one step further. They have sensors called pit organs located next to their middle legs. These organs can detect infrared radiation produced by forest fires from up to 50 km away. The radiation generates heat in the pit organs and then directs the beetle to fly towards the flames. Their breeding requires laying their eggs in freshly burned trees. These wood-boring beetles fly to forest fires in great numbers, and mate while the forest is still burning. Females then deposit their eggs under the bark. The eggs hatch into larvae that feast for up to a year before pupating and tunneling their way out as mature beetles.

Numerous other insects can be found in burnt wood. Predators and scavengers (e.g., clerids and rove beetles) live in the galleries created by bark beetles and woodborers, feeding on their larvae. Carpenter ants do not eat the wood but use any semi-rotten areas to build their nests.



References

BC Ministry of Forests and Range – Southern Interior Forest Region. 2006. Firebugs. <http://www.for.gov.bc.ca/hfd/pubs/Docs/P/P079.pdf>

Glass, D. 2008. Fire Beetles. <http://indianapublicmedia.org/amomentofscience/fire-beetles/>

Leatherman, D. and Aguayo, I. 2007. Insects and Diseases Associated with Forest Fires no. 6.309. <http://csfs.colostate.edu/pdfs/06309.pdf>

Bits and Pieces

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A Year with Forest Health

Justin Smith

Fall is here and the change in the leaves marks my one year anniversary with the Forest Health group. When I started here last September, I entered a realm of forestry that was somewhat unfamiliar to me. I have learned so much about the world of insects and their populations that affect our forests here in Nova Scotia and I'm thrilled at the chance to be involved with their management and monitoring. Not to mention the opportunity to travel nearly every road in the entire province! We have an excellent team, built with great people and I am excited to spend many more years with them. I just hope they don't all go by as fast as this one.

A Cautionary Tale of Invasives

Mike LeBlanc

In light of all the news about invasive insects and the havoc they wreak on our native flora and fauna, I have my own story of just how easily these things can be imported from afar.

My next door neighbours, both of whom were retired seniors at the time, traveled each year to Florida with their travel trailer (snowbirds) to avoid the winters here. After returning one day in April they had a party in their backyard. As we sat by the fire, I noticed a 4 inch diameter pine log about 18 inches tall standing on edge next to the husband's chair. It had an unusual bark which I didn't recognize so I asked him what kind of tree it was. "I dunno," he replied. "Something I picked up along the way home from Florida, North Carolina maybe, or Virginia. It was in the firewood pile at a stop over and it was just the right height to put my beer on when I was in my lawn chair."

Upon closer examination I saw numerous exit holes in the bark and mentioned that doing that probably wasn't a good idea and I explained to him why. "Oh!" was his reply. "You should have been here when I pulled out the awning on the trailer to dry it out after being caught in a downpour on our way home. Two little yellow frogs fell out and made it to the woods." This is a true story.

Whitemarked Tussock Moth Survey

Jeff Ogden

With the help of our GIS Analyst, James Bruce, and a great deal of truck time by Forest Health staff, the whitemarked tussock egg mass survey has been mapped, revamped and ground truthed, and is ready to be returned to the district Pest Detection Officers this fall. By utilizing maps demonstrating the areas of susceptible host material, all survey points have been visited by Forest Health and have been deemed suitable for this project. Some areas may have a reduced number of points for 2013 compared to previous years, but this change better reflects the current forest structure and composition. PDO's can expect to receive new coordinates and project protocol within the next few weeks.



**Someone just threw a bottle of Omega 3 pills at me.
Don't worry, I only suffered super fish oil injuries.**

The last laugh . . .

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The schoolteacher was taking her first golfing lesson.

"Is the word spelled p-u-t or p-u-t-t?" she asked the instructor.

"P-u-t-t is correct," he replied. "Put means to place a thing where you want it. Putt means merely a vain attempt to do the same thing."

One day a college professor was greeting his new college class. He stood up in front of the class and asked if anyone in the class was a moron, and if they were, they should stand.

After a minute a young man stood up. The professor then asked the kid if he actually thought he was a moron. The kid replied, "No, I just didn't want to see you standing there all by yourself."

A retired man moves near a junior high school. He spends the first few weeks of retirement in peace and quiet. However, when a new school year begins, three young boys beat on every trash can they encounter every day on their way home from school.

Finally, the man decides to take action and walks out to meet the boys. He says, "You kids are a lot of fun. I'll give you each a dollar if you'll promise to come around every day and do your thing." The kids continue to do a bang-up job on the trash cans.

After a few days, the man tells the kids, "This recession's really putting a big dent in my income. From now on, I'll only be able to pay you 50 cents to beat on the cans." The noisemakers are displeased, but they accept his offer.

A few days later, the retiree approaches them again. "Look," he says, "I haven't received my Social Security check yet, so I'm not going to be able to pay more than 25 cents. Will that be OK?"

"A freakin' quarter?" the drum leader exclaims. "If you think we're going to waste our time beating these cans around for a quarter, you're nuts. We quit."



There was this haunted house on the outskirts of the town which was avoided by all the townsfolk - the ghost which "lived" there was feared by all.

However, an enterprising journalist decided to get the scoop of the day by photographing the fearsome phantom. When he entered the house, armed with only his camera, the ghost descended upon him, clanking chains et al. He told the ghost "I mean no harm - I just want your photograph." The ghost was quite happy at this chance to make the headlines - he posed for a number of ghostly shots.

The happy journalist rushed back to his dark room, and began developing the photos. Unfortunately, they turned out to be black and underexposed.

So what's the moral of the story?

The spirit was willing but the flash was weak.

