



INSECTARY

NS Dept. of Natural Resources
Forest Health

Insectary Notes

SEPTEMBER / OCTOBER 2010

From the Editor

Well, Truro Heights had its first killing frost the week following Thanksgiving. Fall has arrived and we are busy planning the overwintering surveys.

And we're also planning a retirement get-together for Keith Moore. After working with the Department for 29 years, Keith has decided to retire. In honour of this special event, we will be hosting an informal gathering in early December at the Training Room here in Shubie.

In this issue we have presented the results of the spruce budworm pheromone trap survey and an introduction to the Aerial Survey. Also, some information on cleaning up leaves to prevent tree disease next spring.

'Til next time,

Jacqui

Editing . . . a Rewording Activity

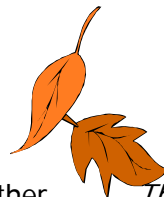
Say What and Quotes

Autumn is a season for big decisions -- like whether or not it's too late to start spring cleaning. -Unk.



Now, today's lawn & garden tip. If you haven't found the hedge trimmer yet, forget it. It's almost time now to lose the leaf rake. -Unk.

I got tired of looking at all those leaves in my yard, so I got up off the couch and went into action. I closed the curtains. -Unk.



The autumn leaves are a lot like raising kids. First they turn on you, and then they fly away. And next thing you know, you look out the window and they're back! -Unk.

Autumn is a great time of the year. Soon those ugly patches of dead grass in your lawn will be covered up -- with ugly patches of dead leaves.

-Unk.

Autumn is a season followed immediately by looking forward to Spring. - Anon.



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Tree Disease Focus

Fall Clean Up

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compiled by Jacqui Gordon

Tar spot of maple and leaf blotch of horse chestnut are two foliar diseases common in most of Nova Scotia. Both are fungal diseases that rarely cause long term damage to established trees but the discolouration of the leaves makes the trees unsightly. These tree diseases flourish in wet weather.

Tar Spot of Maple



Fig. 1 Large tar spot of maple, Aug. 2010.

Hosts

Red, silver, Norway, sugar, and Manitoba maples.

Causal Agent and Symptoms

Two species of *Rhytisma* fungi. These fungi infect the upper surface of leaves, each producing different symptoms. The first species, *Rhytisma acerinum*, causes shiny, raised black spots, approximately 0.5 - 2 cm in diameter, surrounded by a yellow halo whereas *Rhytisma punctatum* produces smaller spots, about 1 mm in diameter, sometimes referred to as speckled tar spots. Leaf tissue beneath a large tar spot turns brown while the tissue below speckled tar spots remains yellow.

Leaf Blotch of Horse Chestnut



Fig. 2 Leaf blotch of horse chestnut, Aug. 2010.

Host

Horse chestnut.

Causal Agent and Symptoms

Leaf blotch is caused by the fungus, *Guignardia aesculi*. It causes reddish-brown blotches on the leaves, usually with a yellow border. The blotches appear on the leaflets and leaf stalks by mid summer. Infected leaves turn brown and may fall early.

Life Cycles

In the spring, fungal spores infect the young leaves. Although symptoms are evident throughout the summer, they are most obvious in August. The fungus overwinters in the fallen leaves.

Control Options for Tar Spot and Leaf Blotch

The best control option for tar spot and leaf blotch is to prevent infection. Since the fungus overwinters in the fallen leaves, rake up and destroy them in the fall. There will be less fungus around to infect the new leaves in the spring. Although this will not provide complete control, it will reduce infection.

References

Attwater, W.A. 2003. Tar Spot of Maple. University of Guelph. Pest Diagnostic Clinic.

<http://www.uoguelph.ca/pdc/Factsheets/Diseases/TarspotMaple.htm>

Sabourin, M., Dykstra, M.D. 2003. Pests & Diseases of Horse Chestnut. University of Guelph. Pest Diagnostic Clinic.

<http://www.uoguelph.ca/pdc/Factsheets/Diseases/HorsechestnutPestDiseases.html>

Provincial Forest Entomologist Overview

What's the Buzz

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Soaring to New Heights

Forest Protection Conducts their Inaugural Provincial Aerial Overview Survey!

Gina Penny

I am happy to report that thanks to a combined effort between Risk Services, Forest Health and Air Services, Forest Protection has completed its first ever provincial aerial overview survey! What is an aerial overview survey you may ask?

Aerial surveys are visual assessments, made from the air, of insect, disease and weather related damage. They are a cost-effective and efficient means of monitoring forest health conditions over a large area.



East-west flight lines spaced 5.5 km apart (Figure 3) were flown over the province using a Departmental helicopter, either a Hughes 500 or Eurocopter 120. Trained observers flew along these prescribed lines at a height of 500 m (1500 ft) and a speed of 90 knots. As they flew, they were continuously mapping the location, size and severity of any damage visible from the aircraft. Attributes, such as host tree and causal agent were also recorded if they could be positively identified.

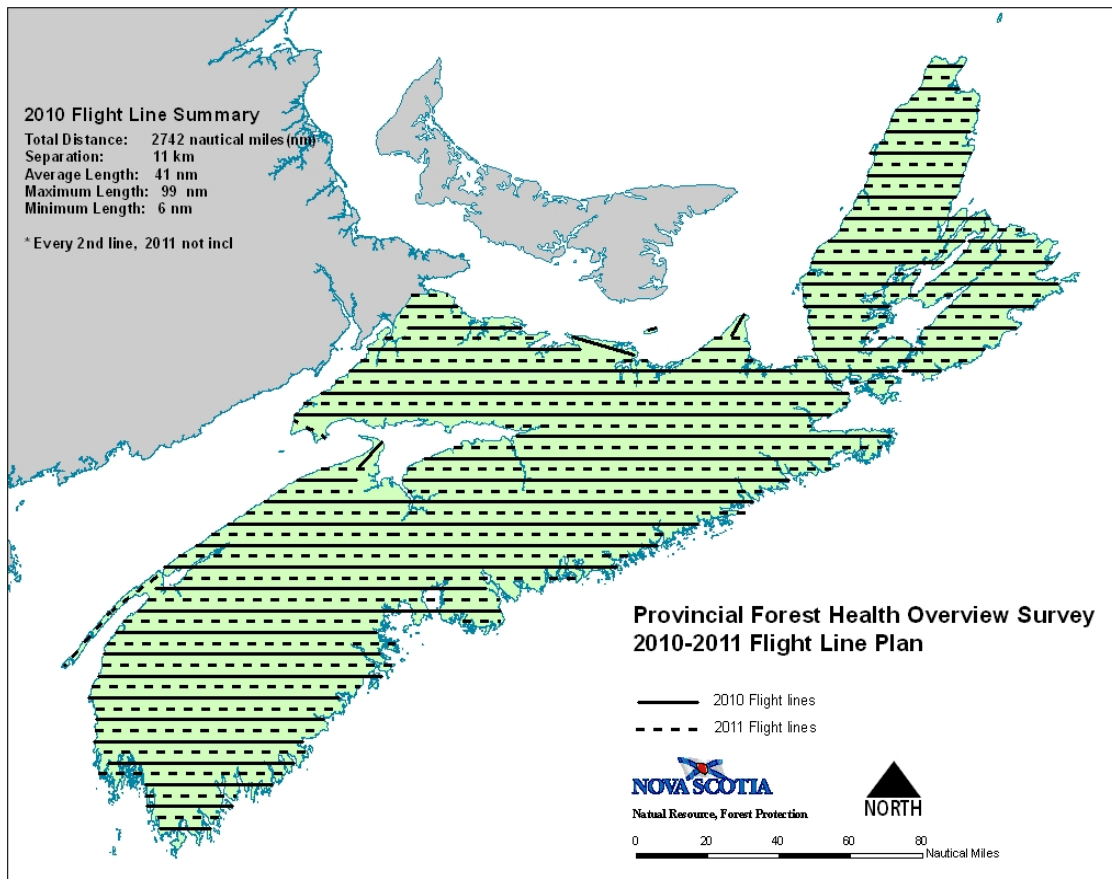


Fig. 3 Provincial Forest Health overview survey flight line plan. Alternate lines will be flown in alternate years.

The information on this map may have come from a variety of government and non government sources and is subject to change without notice. The Nova Scotia Department of Natural Resources accepts no liability for errors, deficiencies, or faults on this map.



Fig. 4 Panasonic Toughbook.

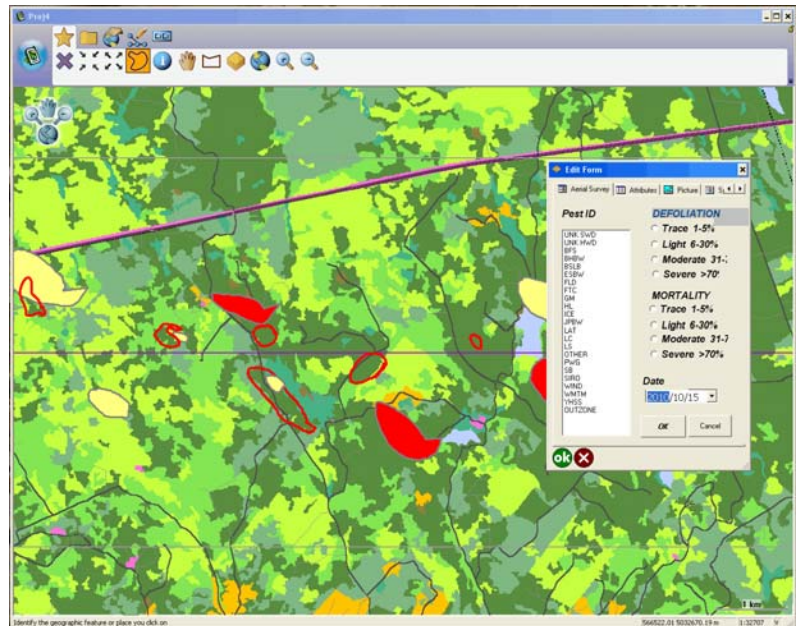


Fig. 5 Screen image showing aerial mapping tool with damaged areas sketched in red .

All of this information was recorded directly onto a PC-Tablet computer (Figures 4 & 5.) Which means all of the data is stored digitally and can be downloaded directly for post processing (i.e., analysis and mapping) when back on land. We timed our survey flights, generally summer and early fall, to coincide with major forest pest biology and peak feeding periods (when the most damage would be visible).

Aerial surveys are only a first step in a multi-tiered process of pest detection, monitoring and evaluation. So we are excited to combine this data with what we collect already through our pest-specific ground surveys (i.e., trapping and overwintering surveys) to develop a more complete picture of their extent and impact on our provincial forest resource.

Bits and Pieces

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Extension Workshop

Jacqui Gordon

In October, Jeff Ogden, Keith Moore, and I attended the Joint Extension Workshop held in and around Wolfville. It was a 3-day event combining speakers from DNR, associated research scientists, education specialists, and other government agencies. The presentations were complemented by field trips and the weather cooperated to make the whole event educational and enjoyable.

Hats off to the organizers for a job well done.

Just when you thought it was safe . . .

Jeff Ogden

With dog ticks all but finished, black flies and mosquitoes merely a bad memory, and fruit flies dwindling, we may want to breathe a collective sigh of relief. But don't forget about the blacklegged tick (BLT). These little devils have been arriving on the ID desk at a furious pace. The adults of the BLT are active in the fall anytime the temperature goes above 5°C. So if you're out and about, enjoying the fall activities, remember to keep up on your tick checks.

Project Update

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Spruce Budworm Pheromone Trap Survey

Jim Rudderham

All of the 2010 spruce budworm pheromone traps have been collected. Thank-you to all the PDO's who took part and helped out. This year there were 85 positive traps out of 150. This is the highest number of positive traps we have seen since 1994. For the last three years, the number of positive traps in Nova Scotia has been increasing. We are not sure what this means for spruce budworm in Nova Scotia but we do know that Quebec is experiencing high numbers of spruce budworm moths. We will continue to monitor and report the results. We will be collecting at least three L-2 points at each positive trap location to wash for overwintering larvae. Results for the washes will follow. We have not seen spruce budworm larvae in the washes since 1994. Maybe this year.

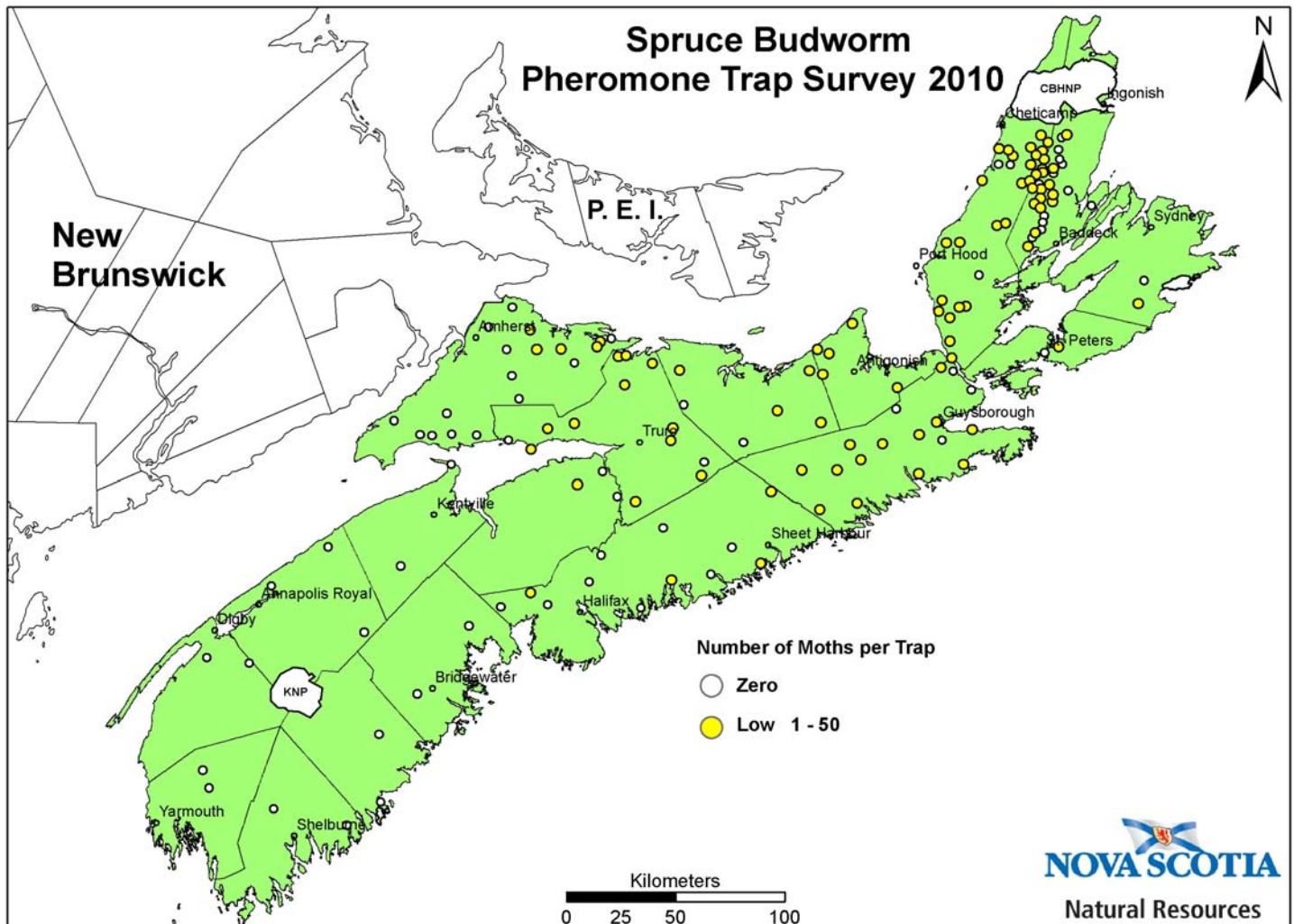


Fig. 6 Spruce budworm pheromone trap survey results, 2010.

The information on this map may have come from a variety of government and non government sources and is subject to change without notice. The Nova Scotia Department of Natural Resources accepts no liability for errors, deficiencies, or faults on this map.

The Last Laugh . . .

And who says kids don't have all the answers . . .

TEACHER: How old were you on your last birthday?

CHARLOTTE: Seven.

TEACHER: How old will you be on your next birthday?

CHARLOTTE: Nine.

TEACHER: That's impossible.

CHARLOTTE: No, it isn't, Teacher. I'm eight today.

TEACHER: How can you prevent diseases caused by biting insects?

JOSE: Don't bite any.

TEACHER: Ellen, give me a sentence starting with "I."

ELLEN: I is . . .

TEACHER: No, Ellen. Always say, "I am."

ELLEN: All right . . . "I am the ninth letter of the alphabet."

Flying Pet

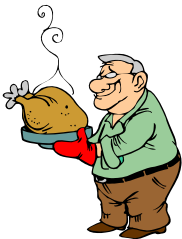
A couple shared their apartment with a parakeet named "Nicky."

The exterminator was scheduled to come, so they put Nicky in the bedroom and hung a sign on the door: "Please skip this room. Do not open door. Pet flies."

The exterminator came. On his receipt he wrote this comment: "Finished all of the apartment except room with pet flies."



I can't hear you



An elderly gentleman with serious hearing problems goes to the doctor who fits him with hearing aids that allow him to hear at 100% for the first time in many years.

The elderly man goes back in a month for a checkup. The doctor says, "Your hearing is perfect. Your family must be really pleased that you can hear again."

To which the gentleman replies, "Oh, I haven't told my family yet. I just sit around and listen to the conversations. I've changed my will three times!"

Caught Swearing

The little boy was caught swearing by his teacher.

"Billy," she said, "you shouldn't use that kind of language. Where did you hear it?"

"My daddy said it," he responded.

"Well, that doesn't matter," she explained, "I don't want to hear that language in here again."

Then she said, under her breath, "At least he doesn't know what it means."

"I do, too," Billy corrected. "It means the car won't start!"