

Insectary Notes

MAY/JUNE 2006



INSECTARY

N.S. Dept. of Natural Resources
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Editor's Overview



Nothing like biting flies and ticks to get your summer going with a bang or a slap as the case may be! The warm, wet weather has created a wonderful habitat for those critters that consider us lunch. Check out page 4 to find ways to eliminate places for mosquitoes to breed. Jeff has completed the Spring Active Surveillance for the blacklegged tick and you can find the survey results on page 5. Mike has kept us up to date on the pale winged grey and jack pine budworm projects on page 6. Keith has put together articles on the balsam shootboring sawfly (page 2), the balsam woolly adelgid, and the balsam twig aphid (both on page 6).

On 25 July, we will be getting together to wish Eric Georgeson a very happy retirement. Eric has been with the Department for more than 25 years. He came up with the idea for this newsletter and has been a major contributor to the articles. Anyone who groans over my sense of humour has Eric to blame, he encouraged me!

I have learned many things working with Eric on this newsletter. I'm a much better speller than I thought I was. I could have an alternate career as a cryptographer/translator after reading Eric's handwriting for nearly 20 years. And then there's rules like . . .

- ☺ Always have a Plan B, and never really worry until you're looking for Plan E, F, or G.
- ☺ Go straight ahead until instructed to do otherwise.
- ☺ There's always time for coffee.
- ☺ There's something funny in everything. You'll keep your sanity if you find it.

And that doesn't include the entomology that Eric has spent so much time teaching us all. I'm sure he'll still be a resource for the CTV News every time there's an insect mystery afoot.

Happy Retirement Eric!! Don't forget to write!

'Til next issue

Jacqui

Jacqui Gordon
Editor

Say What and Quotes . . .

I've developed a new philosophy . . . only dread one day at a time. -Charlie Brown

Whatever is not nailed down is mine. What I can pry loose is not nailed down. -Collis P. Huntington

There are some situations from which one can only escape by acting like a devil or a lunatic. -George Orwell

May the forces of evil become confused on the way to your house. -George Carlin

After an incident in Croydon involving a police van and a concrete mixer, police are looking for eighteen hardened criminals. -The Two Ronnies, BBC TV

The time for action is past! Now is the time for senseless bickering! -Ashleigh Brilliant

You never know how many friends you have until you rent a house on the beach.

Nothing cures insomnia like the realization that it's time to get up.

Men Wanted for Dangerous Expedition: Low Wages for Long Hours of Arduous Labour under Brutal Conditions; Months of Continual Darkness and Extreme Cold; Great Risk to Life and Limb from Disease, Accidents and Other Hazards; Small Chance of Fame in Case of Success.
~ Sir Ernest Shackleton, explorer

Insect Focus

Balsam Shootboring Sawfly

Pleroneura brunneicornis (Rowher)

Keith Moore

For two years, 2003 & 2004, the shootboring sawfly showed up on most lots in the western end. And then, in 2005, there was very little sign of it and it was thought to have collapsed. A big sigh of relief!!!

However, it's back!! According to the literature it likes to skip a year and then come back, which suggests a two-year life cycle. Someone even went out on a limb to suggest that it is more prevalent in even years. 2006 ... could explain why damage is found right across the province. Now I am in trouble, a bug that can count!! Yikes!!

Hosts

Balsam fir and Fraser fir (Particularly hard on late flushers).

Damage

In speaking with some of the growers, they informed me that in most cases the damage covers up because the damaged shoots are pushed to the side by uninfected shoots and that the hollowed out ends break off leaving a clean tree. BUT, in early May as the buds start to elongate all the damaged, pushed flat button buds, really make the tree look bad and cause considerable panic!

Life Cycle

Here is a quick overview of the life cycle taken from the Maine Department of Conservation Newsletter. Remember, understanding the life cycle is half the battle. Adults emerge from an earthen cocoon underground where they spent the winter. The adult flies to the buds as they start to break and lays eggs. The eggs hatch into larvae. The larvae crawl toward the bud tip and then begin boring back through the new shoot base. By early June, the larvae have molted four times and are ready to drop to the ground where they pupate and stay until the following spring.

Control

The only time this insect is in the open to treat is in early spring when the adults are flying from the ground to the tree buds. Once damaged buds are seen, it is too late to treat!

And we can't say it too many times ...
Don't let insect or tree disease problems catch you by surprise. Check your woodlot and tree lots often!

Most Un-wanted List

- Black Flies
- Mosquitoes
- Horse Flies
- Deer Flies
- Moose Flies
- Uglynest Caterpillar
- Ants
- Sawflies
- Earwigs
- Dog Ticks (this one is slowly crawling off the list for the year)
- Fungal Diseases (with the heavy rains in June came foliar diseases such as: Anthracnose, Needle Blight, and Needle Cast)
- Whitemarked Tussock Moth

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The Provincial Entomologist's Notes and News

If there can be one insect that sums up the spring and summer so far, it's ants. In an earlier newsletter, I thought they would be a problem this year due to the soft winter. I was really hoping to be wrong but as luck would have it, I was more correct than I thought. Their survival over the last winter was "phenomenal" and the number of calls from distressed homeowners has been very numerous and not very happy. One big problem . . . the large amount of rain over the month of June is forcing ants to forage in houses. The advice I have been giving people is to find where they're coming in and to use ant drops. The ants take the poison back to the nest and feed it to the queen, larvae and the nest worker ants. The problem is it's not a silver bullet and depending on how big the nest is could take several days before the colony is killed.

This is my last update as Provincial Entomologist before I retire on 31 July 2006. I have met a lot of interesting people, to say the least, over my career. I always enjoyed talking to people and there is nothing like an insect infestation for an ice breaker. I don't think I will ever get away from that completely as I'm getting more calls at home now than I am at work. After all, that's what I always thought a civil servant was . . . a servant to the people. Yes, I know it sounds out of place in today's world, but I like keeping things simple.

I started with the Department working as a casual seven days a week on the Budworm Hotline. Sitting, I might add, on a desk chair that had no back just a metal post where the back used to be. There was no leaning back there. I was in Dr Tom Smith's office as he was out in the field during the spring and summer. Actually his was usually the only call I would get per day when he checked up on me making sure that I wasn't sleeping. Fortunately, Tom had a well-stocked library in his office and I spent my days reading. It either was that or go nuts with boredom. So the best advice I can give my replacement when they come on staff is spend the first month and a half sitting in a backless chair reading Entomology textbooks for eight hours a day, seven days a week, waiting for a random call to see if they're awake. If they can survive that then they can survive anything Nova Scotia can throw at them!

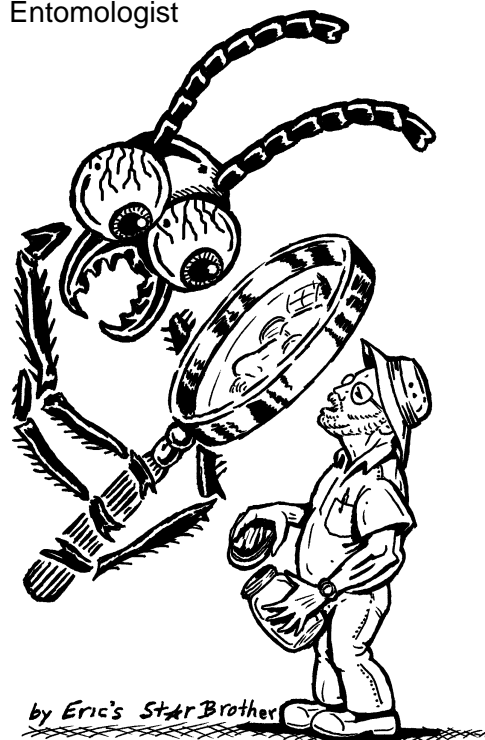
Remember to keep your sense of humour and a

roll of duct tape handy.

See you in the funny papers,

Eric

Eric Georgeson,
Provincial Entomologist



"I think I'm gonna need a bigger jar!"

Some Newsletter Stats . . .

Jacqui Gordon

Just over 13 years ago, Eric was finally able to put together the newsletter that had been sitting in the back of his mind for some time. I looked back over the issues and found the following:

IPM has produced 116 issues of the newsletter. The first issue was produced in July 1993.

Eric has written 268 articles . . . and just in case you were wondering that's roughly 69,237 words. His articles have ranged from "How to Conquer the Paper Pile Up" to "The Dirty Little Louse."

I'm hoping that in his retirement, he'll still have time to jot down a note or two, I'll have my spellchecker at the ready!

Bits and Pieces

Make Your Property Unfriendly for Mosquitoes

Jacqui Gordon

We may be feeling a bit soggy from all the June rain, but mosquitoes are definitely thriving. Mosquitoes complete part of their life cycle in standing water, so it's no wonder our evenings are full of the sounds of humming and slapping (and not in a good way.)

Ways you can help to control the mosquito invasion . . .

- Eliminate standing water in such things as pool covers, flower pots, children's toys, old tires, etc.
- Clean clogged roof gutters on an annual basis, particularly if the leaves from surrounding trees have a tendency to plug up the drains. Roof gutters are easily overlooked but can produce millions of mosquitoes each season.
- Turn over plastic wading pools when not in use. A wading pool becomes a mosquito producer if it is not used on a regular basis.
- Turn over wheelbarrows and change water in bird baths at least twice weekly. Both provide breeding habitat for domestic mosquitoes.
- Aerate ornamental pools or stock them with fish. Water gardens may become major mosquito producers if they are allowed to stagnate.
- Clean and chlorinate swimming pools that are not being used.
- Use landscaping to eliminate standing water that collects on your property. Mosquitoes can develop in any puddle that lasts more than four days.

Encourage your neighbours to get in on the fun too.

West Nile Virus Mosquito Surveillance

Mosquito surveillance began 1 July and will continue until 1 October. All *Culex* species collected will be tested for West Nile Virus.

Can you find the Mosquito Breeding Areas (aka standing water)? There are 8 shown.



1. Water in tire swing, 2. Clogged rain gutters on house, 3. Rain barrel, 4. Bird bath, 5. Wading pool, 6. Puddles in tire ruts, 7. Cattail marsh, 8. No screens on windows.

Martians?

Eric Georgeson

There has been some mystery surrounding the appearance around the province of odd shaped insect traps.

The traps are plastic, having a green accordion shaped base with a number of small holes. The top piece of the trap is made of yellow plastic and looks like the fins found on World War II bombs. The whole assembly is about one foot long.

Despite rumours that these traps were placed by "Marvin the Martian" they were actually placed by the Canadian Food Inspection Agency. Unlike Marvin, whose main objective was to hear the "Earth-Shattering Kaboom!" when he blew up the earth, the CFIA is interested only in trapping Japanese Beetles that may be trying to take over the province. Unless of course the Japanese Beetles are working for Marvin the Martian, in that case it would be very important for the CFIA to check out the "Kaboom!" potential of the Japanese Beetle. One can never be too careful!

A Letter Home . . .

Dear Ma and Pa:

I am well. Hope you are. Tell Brother Walt and Brother Elmer the Marine Corps beats working for old man Minch by a mile. I was restless at first because you got to stay in bed till nearly 6 a.m., but am getting so I like to sleep late.

Tell Walt and Elmer all you do before breakfast is smooth your cot and shine some things. No hogs to slop, feed to pitch, mash to mix, wood to split, fire to lay. Practically nothing. A man's got to shave but it is not so bad, there's warm water.

Breakfast is strong on trimmings like fruit juice, cereal, eggs, bacon, and stuff, but kind of weak on chops, potatoes, ham, steak, fried eggplant, pie and other regular food. But tell Walt and Elmer you can always sit by two city boys that live on coffee. Their food plus yours holds you till noon, when you get fed again. It's no wonder these city boys can't walk much.

We go on "route" marches, which the Platoon Sergeant says are long walks to harden us. If he thinks so, it is not my place to tell him different. A "route march" is about as far as to our mailbox at home. Then the city guys get sore feet and we all ride back in trucks. The Sergeant is like a schoolteacher. He nags some. The Capt. is like the

school board. Majors and Colonels just ride around and frown. They don't bother you none.

This next will kill Walt and Elmer with laughing. I keep getting medals for shooting. I don't know why. The bulls-eye is near as big as a chipmunk head and don't move. And it ain't shooting at you, like the Higgett boys at home. All you got to do is lie there all comfortable and hit it. You don't even load your own cartridges. They come in little metal boxes.

Then we have what they call hand-to-hand combat training. You get to wrestle with them city boys. I have to be real careful though, they break easy. I'm about the best they got in this except for that Tug Jordan from over in Silver Lake. He joined up the same time as me. But I'm only 5'6" and 130 pounds and he's 6'8" and weighs near 300 pounds dry.

Be sure to tell Walt and Elmer to hurry and join before other fellers get onto this setup and come stampeding in.

Your loving daughter,

Emma Lou

P.S. Speaking of shooting, enclosed is \$200 towards a new barn roof. The city boys shoot craps, but not very good.

Project Updates

Tick Surveillance/Lyme Disease

Jeff Ogden

Using the data collected from the Passive Tick Surveillance in 2005, 3 new potential blacklegged tick populations survey sites were identified. In May 2006, in cooperation with Health Canada, we began Active Surveillance in Mersey Point, Queens Co., Bedford, Halifax Co., and Ferguson's Cove, Halifax Co. We also continued to monitor the population in the Lunenburg Peninsula.

And what does Active Surveillance entail? ... it's not as glamorous as you may think. Two procedures are involved: drag sampling, where a sheet is dragged through the grass and the ticks are picked off, and small mammal trapping, where ticks are removed and blood samples are taken from the mammals caught. The blood samples are then sent

away and tested for the presence of the agent that causes Lyme Disease. Passive Surveillance is an ongoing program where ticks are sent in from veterinarians and the general public. These ticks are identified and then sent on the Health Canada for disease testing.

The results of the 2006 Spring Active Surveillance have produced a clearer picture of the distribution of the blacklegged tick in Nova Scotia. In Bedford, drag samples collected all stages of the blacklegged tick. Immature ticks were collected in the small mammal survey. These results indicate that this is an established population in Bedford. In Ferguson's Cove, no ticks were collected in either part of the Active Surveillance which indicates there

is no established population in that area. In Mersey Point, there were a low number of immature ticks collected from the small mammal survey and low numbers collected in the drag surveys. This indicates an established, but low population of blacklegged ticks. Results from the Lunenburg peninsula indicate a continued established population.

Spring Survey Summary:

Bedford has an established blacklegged tick population. Mersey Point has a low level established population. Ferguson's Cove does not have an established population.

And what does the summer hold? Since there were multiple tick submissions from the Antigonish area in 2005, Health Canada has decided to conduct Active Surveillance in Antigonish Co. in July. Passive Surveillance will continue as ticks are processed and then sent to Health Canada for testing.

Balsam Woolly Adelgid and the Balsam Twig Aphid

Keith Moore

First off, I want to thank the Cape Breton Christmas Tree Growers for inviting me to tour their lots and for taking the time to spend a day or so with Scott MacEwan and me. As Scott says, I tortured you with some of my dry quotes. Well, no one left! I enjoyed the visit and will be back!!!

How does the saying go ... Liars always figure but figures never lie! Or better still the more I think I know, the more I find out I don't know! I've been tracking the woolly adelgid this spring at various weather stations across the province and there are

some peculiar trends I can't quite figure out. But I do have some ideas!

In and around the Bras d'Or lakes, the population was expected to increase because of good winter survival due the warm winter. On a spring visit with the Christmas Tree Growers in Cape Breton, I dug out my trusty hand lens and fully expected to be able to find all kinds of adults. Much to my chagrin, I looked around the tree lots and had difficulty finding the critter.

Not to be out done, I broke out the microscope in Dwight Alaffe's garage and proceeded to look even further. Again, no woolly adelgid! HMMMM! What the heck is going on? Were they still in the winter nymph stage and therefore very hard to see? Everywhere else in the province I had looked, the nymphs had shed their skins and some adults were laying eggs. At this time in their life cycle, the adults are as big as they are ever going to get and can be picked up with the naked eye, usually at the base of the buds. Generally this occurs just prior to bud break. Dwight had been telling me he couldn't see the BWA and he was right. They are darn hard to see if they aren't there!

Something had drastically reduced the population. As usual, I have theories as to what might have happened . . .

- Climate change working for us.
- Spiders everywhere.
- But, what I'm leaning toward is this ...I think, it was so warm around the Bras d'Or, that the BWA came out of its dormancy and then got zapped by just a little bit of freezing. It wouldn't take much once they're active.

It's a bit of a mystery. And I love a good mystery!

That being said, in general, the woolly adelgid populations are increasing. Branches were collected from weathers stations (Yarmouth to Halifax) when the buds started to unfurl. Examination with a microscope showed many crawlers attaching themselves to the new growth. The adults die after laying eggs and were washed away by the heavy rains.

The Balsam Twig Aphid

Keith Moore

(April showers bring mayflowers - May showers bring less aphid?)

I've been chatting with the Christmas Tree specialists, Scott MacEwan and Ross Pentz, to try to get a handle on what's going on with the twig aphid. In general, in the northeastern areas about 20% of lots had to be treated. 80% were fine. Basically a reverse of last year which means the population is decreasing.

In the western end, the counts started out high and then steadily declined. Although there were some spot treatments, in most cases, it was not severe enough to treat. Ross thinks that the heavy rain and possibly disease could be controlling it. Good by twig!! Hello rain. Okay enough rain!!! Have a great summer everyone, I'm sure the monsoon season is just about to end!!

Pale Winged Grey

Mike LeBlanc

Larva counts using a beating sheet began the week of May 31 in the Caledonia area of Queens County. This procedure was repeated on a weekly basis with only low population numbers being collected until the week of June 21, when we collected up to 60 larvae per beating. At that time feeding damage and red needles were easily seen on the new shoots of eastern hemlock trees.

Jack Pine Budworm

Mike LeBlanc

We have been monitoring the larval development of this forest pest weekly since June 1 in a mature white pine stand north of Low Landing (Mill Rd.). Larval numbers averaging from approximately 1 up to 8 per new shoot have been counted. We will be putting out 50 pheromone traps for the adult moth in the western region.