

Insectary Notes

SEPTEMBER/OCTOBER 2006



The New Provincial Entomologist

I am pleased to announce that Gina Penny was the successful candidate in the recent interviews and she will be joining Forest Protection on November 20, 2006 as the new provincial entomologist.

A resident of Antigonish County, Gina comes to the Division with a wealth of entomology experience from Canada and the US. After completing her Bachelor of Science in Integrated Pest Management at the NSAC, Gina headed to the US to complete a Masters of Science in Horticulture (Weed Science) at North Carolina State University and then a Masters of Science in Entomology from Ohio State University. In numerous field jobs, She has earned quite a reputation for her dedication to extension/ outreach and for her enthusiasm for entomology.

More recently, Gina has been working as a senior lab instructor at St. Francis Xavier University. Her family also runs a Christmas tree operation in Antigonish County.

I hope everyone will welcome her to Shubie and the Department on the 20th of November.

Walter Fanning
Manager, Forest Protection

Insectary Notes - Electronic Copies

Just a reminder that the newsletter is available by email. Not only will you get your copy a few days earlier, you'll also be able to see the colour on our maps.

Email Jacqui Gordon at
gordonjm@gov.ns.ca
if you'd like to receive the newsletter by email.

INSECTARY

N.S. Dept. of Natural Resources
P.O. Box 130 Shubenacadie
Hants Co., Nova Scotia
B0N 2H0

Say What and Quotes . . .

Computers are incredibly fast, accurate, and stupid; humans are incredibly slow, inaccurate, and brilliant; together they are powerful beyond imagination. - Albert Einstein

A half truth, like half a brick, is always more forcible as an argument than a whole one. It carries better.
-S. Leacock

People ask me what I'd most appreciate getting for my eighty-seventh birthday. I tell them, a paternity suit. -George Burns.

Sharp as a sack full of wet mice. -Foghorn Leghorn

Letter Scramble . . .

DORMITORY: When you rearrange the letters:
DIRTY ROOM

SNOOZE ALARMS: When you rearrange the letters:
ALAS! NO MORE Z 'S

Definitions . . .

DUST: Mud with the juice squeezed out.

EGOTIST: Someone who is usually me-deep in conversation.

HANDKERCHIEF: Cold Storage.

RAISIN: Grape with a sunburn.

SKELETON: A bunch of bones with the person scraped off.

TOMORROW: One of the greatest labour-saving devices of today.

WRINKLES: Something other people have. You have character lines.

Insect Focus

In the September/October 2001 issue of the Insectary Notes, Jeff Ogden wrote an article on Ladybird Beetles. With the number of calls that have been coming in lately, we thought that it was a good time to revisit these beneficial insects.

Ladybird Beetles

Jeff Ogden and Jacqui Gordon

Other Common Names: ladybird beetles, lady beetles, ladybugs

This fall there have been numerous reports of ladybird beetles on and in people's homes. This is not generally a problem or even a surprise. It is very common for ladybird beetles to overwinter in attics or garages, turning up on window sills in the middle of winter. However, this year it is not just one or two of these cute little beneficial insects, there are actually hundreds of them. There have been reports of them covering the sides of garages and homes.

So why are there so many this time of year?

There are at least twelve domestic species of ladybird beetle in Nova Scotia and an additional three or four introduced species. All are predators of pests in our gardens and forests. Species were introduced because of their voracious appetite for pests such as aphids (eating up to 500 aphids per day!). The introduced species have done very well, and in some cases too well. Some of the introduced species have begun to out-compete our native species which reduces the species diversity within the ecosystem.

Ladybird beetles search for a place to spend the winter as the weather turns cooler. As one beetle finds a suitable sheltered spot, it releases a pheromone that attracts more beetles to the same location. During our mild fall days, this may result in high numbers of beetles on the sunny sides of buildings. Although the sight of a hoard of creeping beetles may seem like a Halloween prank, this is one time when it's not quite as bad as it looks.

Are they really a problem?

Lady beetles do not bite or sting and do not cause damage to structures, food, or clothing. Well, ok, if you squash one against your clothing or wallpaper you will get a stain; all the more reason to leave them alone. They will try to find a place to spend the winter and then in the spring they will be on the inside trying to get out.

Because ladybugs are considered beneficial insect, insecticides are not recommended.

Ladybug Legend

Nearly all cultures have legends regarding lady beetles. And these critters have very good reputations! To an English farmer, a lady bug signals a good harvest. In a French vineyard, a ladybug is a sign of good weather. According to a Norse legend, the Ladybug came to earth riding on a bolt of lightning! And in Canada, a lady beetle overwintering in your garage is good luck.

And if the number of ladybug calls we have received is any indication, we can conclude that there will be a lot of good luck in Nova Scotia.

References

1995. Spot the Ladybug. Canadian Nature Federation Lady Beetle Survey. Pamphlet produced by CNF.

1996, Dec. Ranger Rick.

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Bits and Pieces

The 101 Most Influential People Who Never Lived

Jacqui Gordon

This book is described as "how characters of fiction, myth, legends, television, and movies have shaped our society, changed our behaviour, and set the course of history." A recent radio program featured the authors and sounded very interesting.

So, I immediately went to the website (www.101influential.com) to find out where my favourite characters fit. I admire the marketing sense of the authors who saw fit to include the top 50 characters (guess I'll have to find the book to check out the rest.)

The Top Ten

1. The Marlboro Man
2. Big Brother
3. King Arthur
4. Santa Claus
5. Hamlet
6. Dr. Frankenstein's Monster
7. Seigfried
8. Sherlock Holmes
9. Romeo and Juliet
10. Dr. Jekyll and Mr. Hyde

Other Notables . . .

12. Robin Hood
21. Smokey Bear
32. Archie Bunker
33. Dracula
42. William Tell
43. Barbie
49. Tarzan
50. Captain Kirk and Mr. Spock

Although I have not read the remaining 51 on the list, I have been informed of one travesty: Bug Bunny did not make the list. Thanks to Keith who brought this book and website to my attention.

"Information? I need the number of the Caseway Insurance Company." "Would you spell that, please?" "Certainly. C as in sea. A as in aye. S as in sea. E as in eye. W as in why. A as in are. Y as in you." The operator pauses. "Just a minute, sir. I'll connect you with my supervisor . . ."

Field Notes From the Tick Survey

Jeff Ogden

I write this while sitting at the deer-check station in Lunenburg awaiting the next deer hunter and his/her most recent kill. The completion of this exercise brings to a close the active surveillance portion of the 2006 Blacklegged Tick Survey.

Tick surveillance in Nova Scotia has been ongoing since 2002 and is only possible through the cooperation of NSDNR, the Public Health Agency of Canada, NS Health, and the NS Museum.

Surveillance activities include;

1. Passive surveillance: ticks sent in from across NS from DNR regional staff, vets, doctors, and the general public
2. Small mammal trapping: to help determine tick establishment and infection rates
3. Drag sampling: to help determine tick distribution and infection rates
4. Road-killed deer survey: to help determine tick distribution and rate of spread
5. Hunter-killed deer survey: to help determine tick distribution in Lunenburg County and rate of spread of the blacklegged tick from its previously known local

And that is where we are now. We (Dr. Robbin Lindsay from PHAC in Winnipeg and myself) have been manning the Lunenburg deer check station since the first day of the season asking hunters as they arrive to inspect their deer for blacklegged ticks. We do get the occasional strange look, but generally the hunters are only too happy to oblige, as well as take the opportunity to chat about the hunt and show off their deer. Thus far numbers of deer arriving at the check station are down a bit from 2004 and 2005, even with an additional 750 doe licenses being issued for this region. This may be partly due to on-line registration and poor hunting conditions the first few days of the season. From the inspections that have been completed there has been a noticeable expansion of the ticks north and west from the area surrounding the town of Lunenburg into the Maders Cove, Mahone Bay, and Blockhouse areas. A more complete picture of the tick distribution from this survey will be compiled following a closer look at submitted deer hide samples and updated later. Other survey results will also follow at a later date.

Well here comes another half-ton with a deer on back . . . back to work.

This is Field Entomologist turned Field Reporter reporting from in back of the Irving ... "Gidder Done"

Project Updates

Pale Winged Grey

Mike LeBlanc

The Pale Winged Grey (PWG) continued to cause damage this year in the same locations as last year, and has been observed causing damage in new areas near Greenfield, Bakers Settlement, Conquerall Mills, and South Rossignol (see Figure 1.)

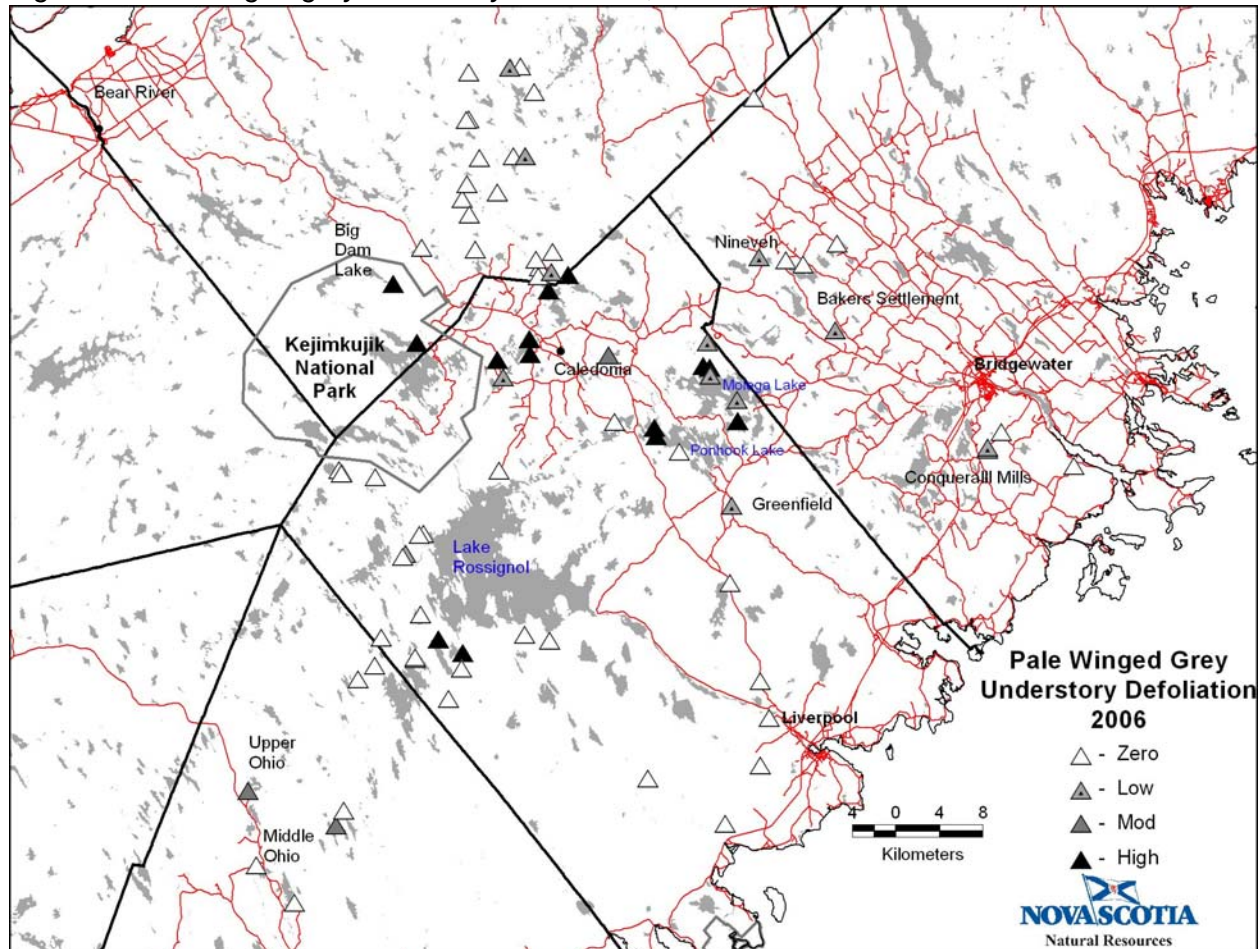
On a positive note, numerous sick and diseased larvae have been seen in the Harmony Lake area which has been heavily defoliated over the past two years. This is a good sign that natural control factors have kicked in and are impacting the population . . . finally! Peter & Jane and Heidi & Bill will be particularly happy to hear that, as well as everyone else who has been affected in that area. I expect that there will be fewer (hopefully none) PWG larvae around next year.

As with most insect outbreaks they usually collapse on their own, mainly due to naturally occurring fungi or viral pathogens. All without direct influence from us, nature itself decides when enough is enough. Unfortunately these factors take several years to kick in, so the damage is still done.

Why don't we infect the population with the virus? We could if we could get it. Chemical and biological insecticides can be concocted and reproduced in a factory at a reasonable cost. A virus, for instance, is very expensive to produce. My understanding is that the virus must be grown in its host, the larva. This would mean an insect rearing project on a monumental scale. I'm not sure how many million (billion) insects would be needed but I'm sure someone has worked it out (if they read this please let me know). I wonder how much forest we would need to cut down to feed the little critters.

(Continued on next page)

Figure 1. Pale winged grey understory defoliation, 2006.

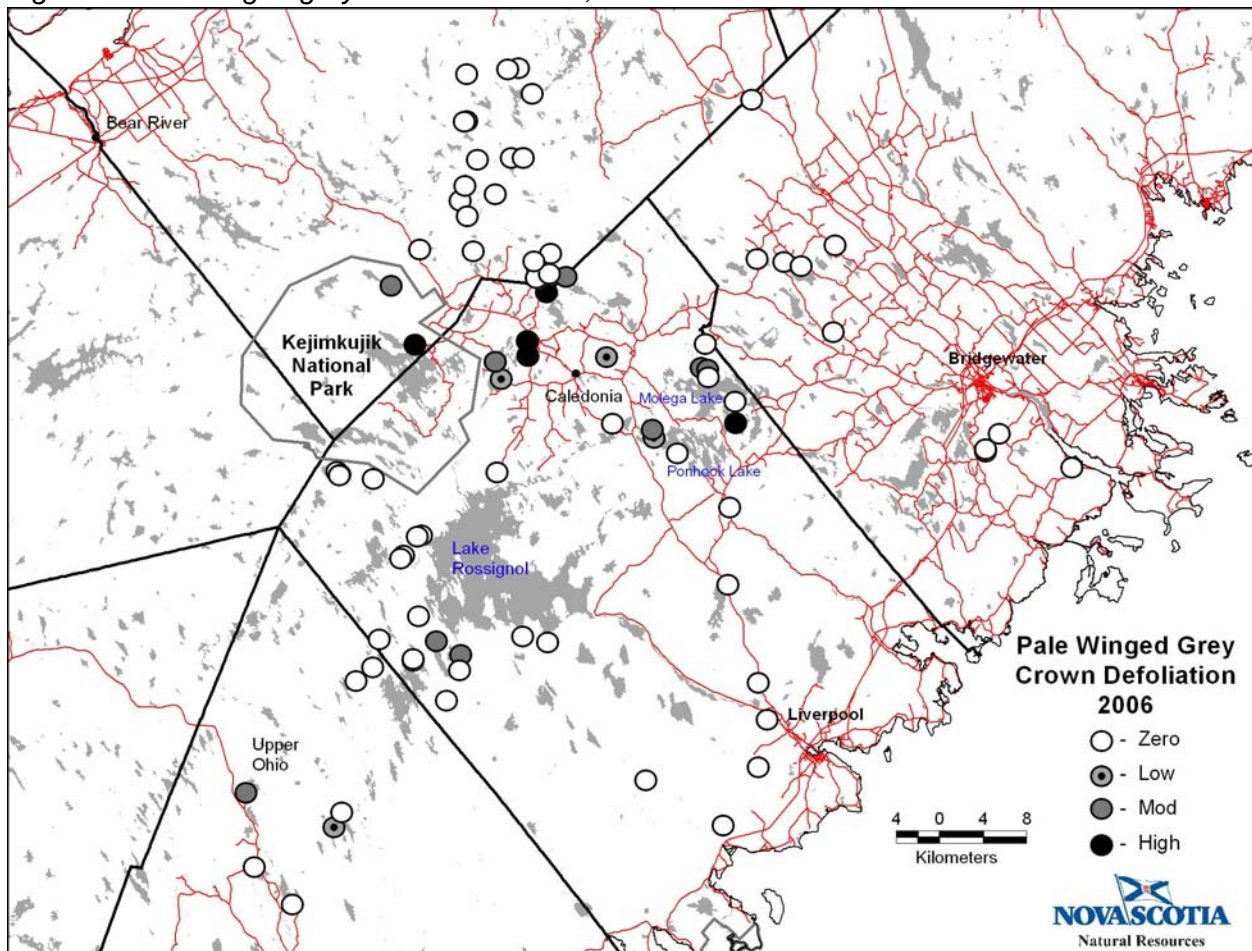


We were also involved in a study with Dr. Ostaff and Dr. Silk from Fredericton, N.B. who are developing a sex pheromone we could use to attract male moths to traps. We could use the number of moths caught as a predictor of the potential damage that might occur the following year and also as a mating disruptor. We hoped that this, in combination with the foam traps which females lay their eggs in, would give us that important information. Unfortunately it doesn't look like we are going to achieve that correlation this year; maybe next year.

Predictive surveys done in the Fall and Winter have been the primary method to assess insect population levels for the following year, and these types of surveys have been standardized for nearly all known forest pests. For instance, hemlock looper egg survey; spruce budworm larva survey; jack pine budworm larva survey. For these insects the assessment is determined from a number of branches collected from each sample point. To make a point, I said *branches*. What we have discovered while attempting to determine where and what to collect for a PWG assessment is that more than 80% of the eggs have been found on the bark of the bole in the live crown section of the trees, the BIG ones. The trees had to be felled to do this, and the bark collected to be processed through a washing procedure in our lab. Its destructive sampling at an unacceptable level but it had to be done. Fortunately, we had a landowner from South Brookfield who came forward to donate his land for any project we wished to conduct, as well as provide his own labour, equipment, horse, etc. (thanks Jim).

So what does that leave us with? Well, we can determine where it is from our beating surveys (larvae); ground defoliation surveys which detect the beginning stage of an outbreak as well as its leading edge or expansion; aerial defoliation surveys that detect where the heaviest damage has occurred, and it may take several years for that damage to become detectable from the air (remember . . . the insect feeds from the bottom up!). So I guess what I'm trying to say here is that we can know where it is, where it was, and where it had been; but we don't know where its going to be or how bad its going to get. Hopefully the work will continue to answer those questions.

Figure 2. Pale winged grey crown defoliation, 2006.



Brown Spruce Longhorn Beetle

Bob Guscott

The BSLB trap results for 2006 show a dramatic increase in positive trap finds. There were 18 positive trap results outside of the BSLB ministerial order boundary. Most of the new positives were found between 25 and 50 kilometres of Halifax in a northeasterly direction. The two furthest positive traps were at Glenmore (62 km) and Sheet Harbour (93 km). All of the positive traps were tended by the Canadian Food Inspection Agency (CFIA). There were zero positive traps among the 65 tended by DNR staff across the province. The CFIA is currently consulting with partners and industry to determine the best course of action.

The CFIA can be reached via their hotline number at 1-877-868-0662.

Figure 3. Brown spruce longhorn beetle trapping survey, 2006.

