



# Insectary Notes

## January / February 2011

### From the Editor

Results and reports . . . that's what this issue is about!

Gina and Jim represented the Department at the annual meeting of the Atlantic Advisory Council on Introduced Forest Pests in January. Gina has written an update on the reports from that meeting.

Projects updates were written by the Project Leaders on balsam woolly adelgid, ticks, whitemarked tussock moth, balsam fir sawfly, and hemlock looper.

'Til next time,

*Jacqui*

Editing . . . a Rewording Activity

### Say What and Quotes

The only reason people get lost in thought is because it's unfamiliar territory. -Anon.

*I told the doctor I broke my leg in two places. He told me to quit going to those places.*

-H. Youngman

Be careful about reading health books. You may die of a misprint. -M. Twain

*A two-year-old is kind of like having a blender, but you don't have a top for it. -J. Seinfeld*



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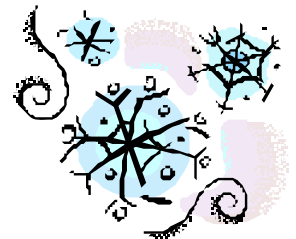
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When I was young, I was called a rugged individualist. When I was in my fifties, I was considered eccentric. Here I am doing and saying the same things I did then and I'm labeled senile. -G. Burns

*I refuse to answer that question on the grounds that I don't know the answer. -D. Adams*

I like long walks, especially when they are taken by people who annoy me. -N. Coward

# Provincial Forest Entomologist's Overview

## ..... What's the Buzz

### Atlantic Advisory Council for Introduced Forest Pests Annual Meeting Summary

Charlottetown, Prince Edward Island, January 18, 2011

Gina Penny

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The Atlantic Advisory Committee for Introduced Forest Pests (AACIFP) is a forum to address forest health and plant quarantine issues of concern to the Atlantic Provinces. It comprises representatives from federal and provincial forestry and agriculture agencies in the Atlantic Provinces. The following is a summary of the information presented at this year's annual meeting.

#### European Gypsy Moth - *Lymantria dispar*

##### 1. Canadian Food Inspection Agency (CFIA) Surveys

- 2010 trapping results - placed delta traps in non-infested areas.

Province	Number of Traps	Positive Traps	Number of Moths
Newfoundland and Labrador	330	1	1
New Brunswick	154	39	302
Nova Scotia	217	15	100
Prince Edward Island	392	202	975

- NB - most positives are in Eastern portions of the province.
- NS - high moth captures in River John and New Glasgow.
- PEI - City of Charlottetown regulated due to high moth captures.
- NL - any moths collected are submitted for genotyping to be sure they're not the Asian strain.

CFIA regulated areas are being further considered to reflect intra-provincial and regional interprovincial movement of host material, while continuing to focus upon public education to reduce the spread to non-infested regions of the US and western Canada.

##### 2. Provincial Department of Natural Resources (DNR) Surveys

###### Nova Scotia

Multipher pheromone traps are deployed at sites province wide to monitor population trends. In 2010, 58% were positive down slightly from 61% the year before with a total of 3093 moths caught up from 2545 recorded in 2009. Increases in moths captured were detected in five counties Annapolis, Halifax, Kings, Lunenburg, and Pictou.

Delta pheromone traps are placed in towns outside the CFIA regulated zone to determine if the population is spreading into new areas. The only town that continues to show a population increase is New Glasgow in Pictou County. The average number of moths caught has been on the rise since 2000. However, this year we saw that number decrease.

## New Brunswick

25 new egg masses were collected from six locations in south-central NB. Overall egg survival was 79% compared to only 26% in 2009. The average number of moths per trap is up for 2010. Summary forecast for 2011 - populations still persist at low levels in the south and in the City of Miramichi. No defoliation is forecast for 2011. Egg masses were found for the first time in Rogersville which is outside of the current CFIA regulated area.

## Municipal Surveys

### City of Charlottetown

Doesn't trap for gypsy moth but does perform visual surveys. Tree maintenance personnel have found larvae and egg masses in some parks. Egg mass numbers seem to be down.

### City of Fredericton

Deployed 49 multiplier pheromone traps. The total number of moths caught is down slightly from 2009. No noticeable defoliation and lower number of egg masses.

### City of Moncton

Average moths per trap increased from 129 in 2008 to 140 in 2010. No traps were deployed in 2009. Egg mass searching wasn't conducted in 2010.

## Brown Spruce Longhorn Beetle (BSLB) - *Tetropium fuscum*

### 1. Combined CFIA and Provincial DNR Surveys

#### Eastern Canada

- 900 trapping sites in Eastern Canada. In 2010, extra traps were added in Cape Breton, NL and Southeastern NB. Otherwise, trapping is similar to 2009 and 2008.
- There are two different trapping site types: 1. Priority Sites, e.g., mills and campgrounds - three traps per site. 2. General Forest Sites - one trap per site.
- 30 positives this year, all in NS. Thirteen are new and 17 are repeats. BSLB can now be found at 59 locations outside the beetle containment area. Significant find - first find in Guysborough County at Liscomb Lodge area.
- This year, in cooperation with trapping surveys conducted by CFIA and NSDNR, NBDNR conducted visual surveys at 439 locations in Southeastern NB. No signs or symptoms of beetle infestation were detected.

## Balsam Woolly Adelgid - *Adelges piceae*

### 1. CFIA Surveys - New Brunswick and Nova Scotia

No active balsam woolly adelgid surveillance conducted.

### 2. Provincial DNR Surveys

#### New Brunswick

- Distribution is limited to plant hardiness Zones 4b and 5a. Mortality of overwintering nymphs occurs below -20°C; high mortality occurs below -30 °C. Winter of 2009-2010 was much warmer than the previous winter with only 5-days with minimum temperatures below -20°C.
- Monitoring was conducted at 12 locations in southern NB. It includes annual measurement of spring adult populations, annual assessment of tree condition into damage classes and biannual measurements of diameters and heights. In 2010, in terms of adults five locations decreased, four locations remained the same, and three locations increased.

## Nova Scotia

- Damage can be found throughout the entire province.
- 14 permanent monitoring plots were established in the fall of 2009. Plots are located within the nine Provincial ecoregions and whenever possible paired with existing Forest Inventory research permanent sample plots in order to compare the impact of the adelgid on the growth, volume, and yield of balsam fir.
- Plot monitoring models what is done in NB. We also placed a data logger at each plot to measure hourly annual temperatures.
- Current baseline plot data found very few adults per plot. Based on the plot temperature data nymph mortality isn't likely as temperatures only fell below -20°C for as few as two but for no more than four days.

**Hemlock Woolly Adelgid - *Adelges tsugae***

## 1. CFIA Surveys

No direct survey conducted in 2010 but will in 2011.

## 2. Provincial DNR Surveys

## New Brunswick

- Surveys were conducted in 2005 and 2007. Stands with >40% hemlock were targeted. Two lower crown branches per tree, 15 trees per stand, were assessed for presence of adelgid life-stages or damage symptoms. No adelgids were detected.

## Nova Scotia

- Forest Health staff conducted detection surveys in forested areas, 15 remote hemlock stands, in the Western Region. All were negative.

**Emerald Ash Borer - *Agrilus planipennis***

## 1. CFIA Surveys

- CFIA conducted surveys in NB, PEI, NL, and NS. All were negative. Three types of surveys are used in Atlantic Canada: visual, trapping and scouting (marking sites of ash in decline).
- In 2010, a two-day aerial survey was conducted in Southern NB examining high-risk areas including urban areas, campgrounds, ports of entry etc. Chlorotic ash trees were marked for future ground-truthing and trapping surveys.
- Looked for *Cerceris fumipennis*, a native wasp used to detect emerald ash borer infestations, at 77 locations in Southern NB. None were collected. Ten sites were really good habitats and will be followed up at a later date.

**Asian Long-horned Beetle - *Anoplophora glabripennis***

## 1. CFIA Surveys

2010 trapping results – all were negative

Province	Sites	Results
New Brunswick	31	Negative
Prince Edward Island	49	Negative
Newfoundland	0	-
Nova Scotia	110	Negative

In 2010, conducted a ring survey around the current infested area (parts of Toronto and Vaughan) and haven't found any infested trees. Survey will continue as it takes five years of no finds to declare an area uninfested.

#### Demonstration Sites

There are two sets of Asian long-horned beetle demonstration sites - one in Dartmouth, NS and one in Fredericton, NB. At each site there are 16 marked trees, identified with a map. Strategy is to enter the site and see how long it takes to detect signs of beetle infestation on these trees. Inspectors also run through these sites before they go out to conduct surveys.

### Other Pests - CFIA Surveys

#### 1. Invasive Alien Species

2010 trapping survey - nine traps at each site, no new species of concern. Rearing of tree bolts is still underway at the CFIA facility.

Province	Sites	Results
New Brunswick	5	Negative
Newfoundland & Labrador	4	Negative
Nova Scotia	10	1 Site Positive

#### 2. Asian Gypsy Moth - *Lymantria dispar*

2010 trapping survey - targeted port sites and industrial areas, all were negative. All moths caught were genotyped and all were the North American strain.

Province	Sites	Results
New Brunswick	20	Negative
Prince Edward Island	9	Negative
Newfoundland & Labrador	8	Negative
Nova Scotia	20	Negative

#### 3. Pink Gypsy Moth - *Lymantria mathura*

2010 trapping survey was combined with the Asian gypsy moth survey.

Province	Sites	Results
New Brunswick	20	Negative
Prince Edward Island	10	Negative
Newfoundland & Labrador	10	Negative
Nova Scotia	20	Negative

#### 4. Sudden Oak Death - *Phytophthora ramorum*

2010 survey - no detections in the Atlantic, mainly a nursery survey.

Province	Sites	Results
New Brunswick	16	Negative
Prince Edward Island	4	Negative
Newfoundland & Labrador	1	Negative
Nova Scotia	5	Pending

#### 5. Dutch Elm Disease - *Ophiostoma ulmi*

All Provinces deemed infested except NL, AB and BC. Saskatchewan is deemed only partially infested. Regulations for policy D-97-07 have been updated to allow for importation and domestic movement of elm material.

### Other Pests - Provincial Surveys

#### Prince Edward Island

##### Japanese Beetle - *Popillia japonica*

- Beetles were found in 2008 around Cornwall and the City of Charlottetown. Suspected that beetles were brought in by campers. Virginia creeper, apple, hawthorn, pin cherry, white birch, mountain ash and blackberry were defoliated.
- Plans for 2011: establish traps in nine regions.

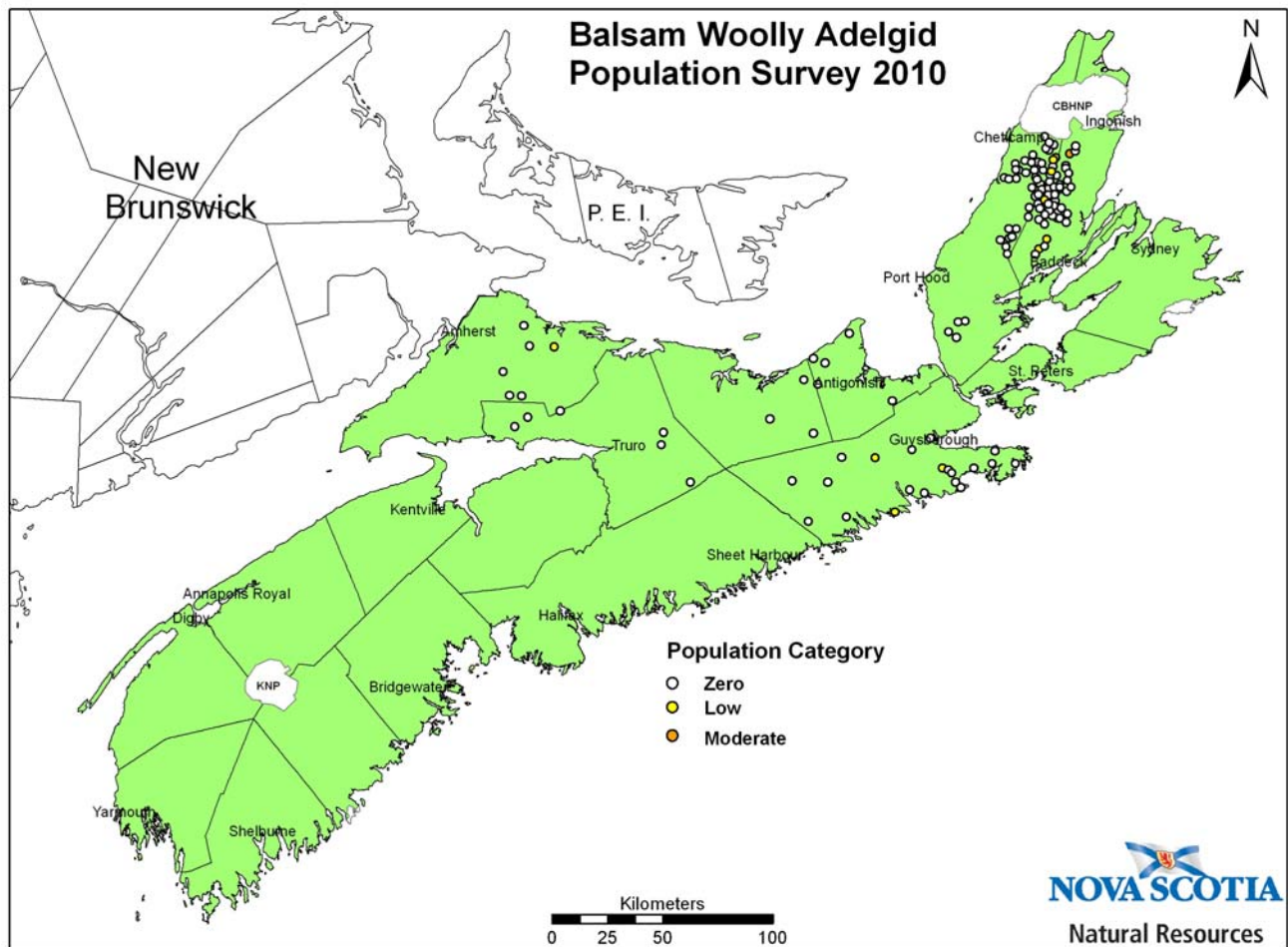
# Project Updates

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## Balsam Woolly Adelgid (BWA) Nymph and Damage Survey 2010

Jim Rudderham

This year, 128 points were checked in Central and Eastern Nova Scotia for live nymphs (Fig.1) and damage (Fig. 2). The points were all collected in November and December and processed in our lab during that same time period. Of the 128 points checked only 11 had live nymphs. Of these same 128 points only a few showed any signs of recent damage. These numbers correspond with our spring plot numbers which also showed very low numbers of BWA.



**Fig. 1** Balsam woolly adelgid population survey results, 2010.

*The information on these maps 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.*

## Balsam Woolly Adelgid (contd.)

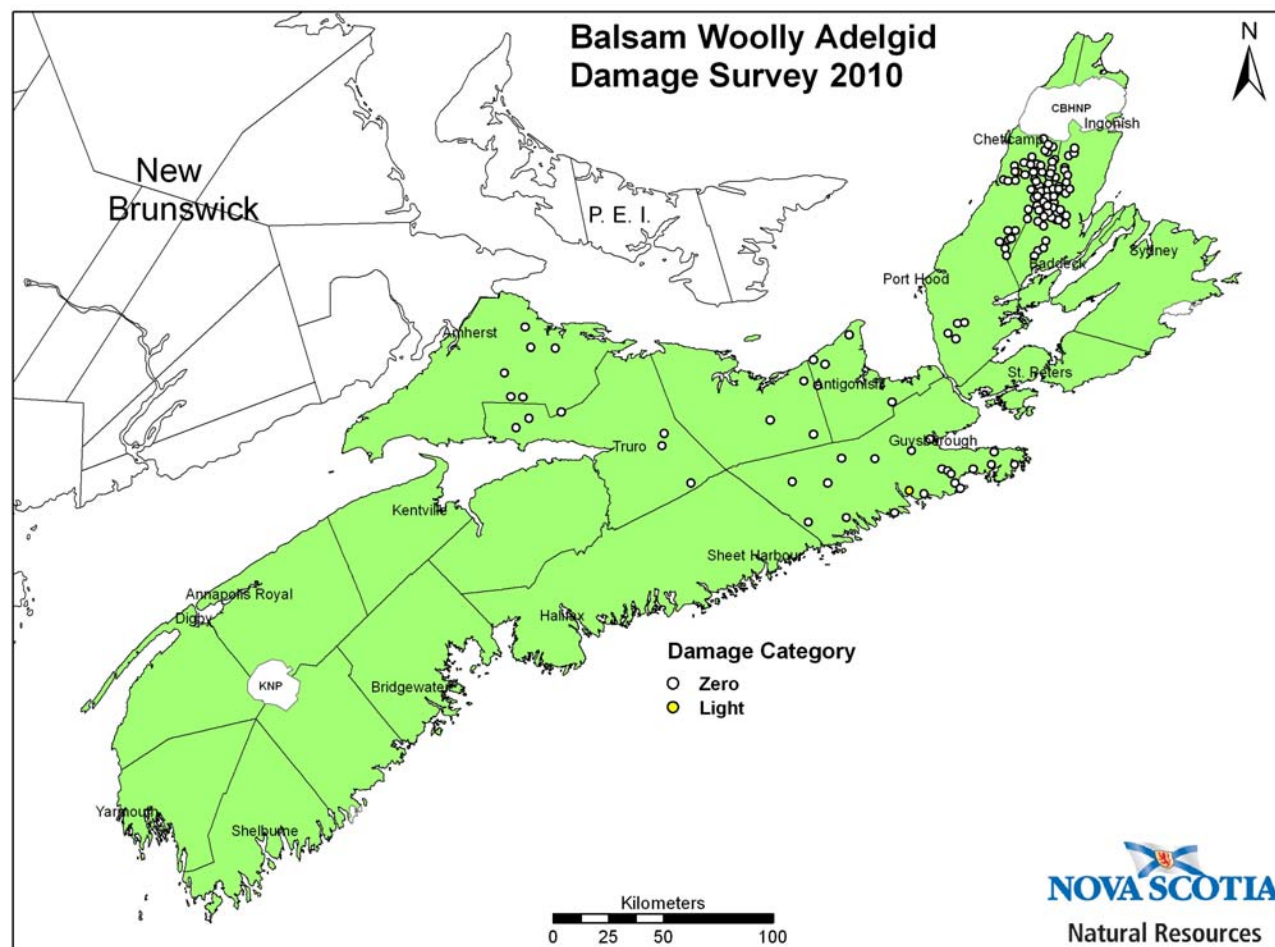


Fig. 2 Balsam woolly adelgid damage survey results, 2010.

## Passive Tick Surveillance 2010

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Jeff Ogden

When first asked to provide a summary of the passive tick survey for 2010 I would have said it was the most “successful” year thus far. Tick submissions were steady throughout the year but picked up to a feverous pace in the fall. In just four weeks between September and October I had more than 400 submissions arrive, seemingly all at once, with the latest tick crossing the desk last week. However when I compared the numbers from previous years, 2010 is very similar. For the third year there were more than 1100 tick submissions from across the province. Nine different tick species were submitted;

more than 62% of those were blacklegged ticks (BLT). This is the first year BLT submissions have outnumbered dog tick submissions.

Another established population of blacklegged ticks was detected in 2010. A large portion of northern Pictou County joins Lunenburg, Bedford, and Gunning Cove on the list of areas of higher risk for Lyme disease in Nova Scotia. Work will continue this winter to determine if any additional sites of concern can be determined from the data.

# Whitemarked Tussock Moth Egg Mass Survey

Terry White

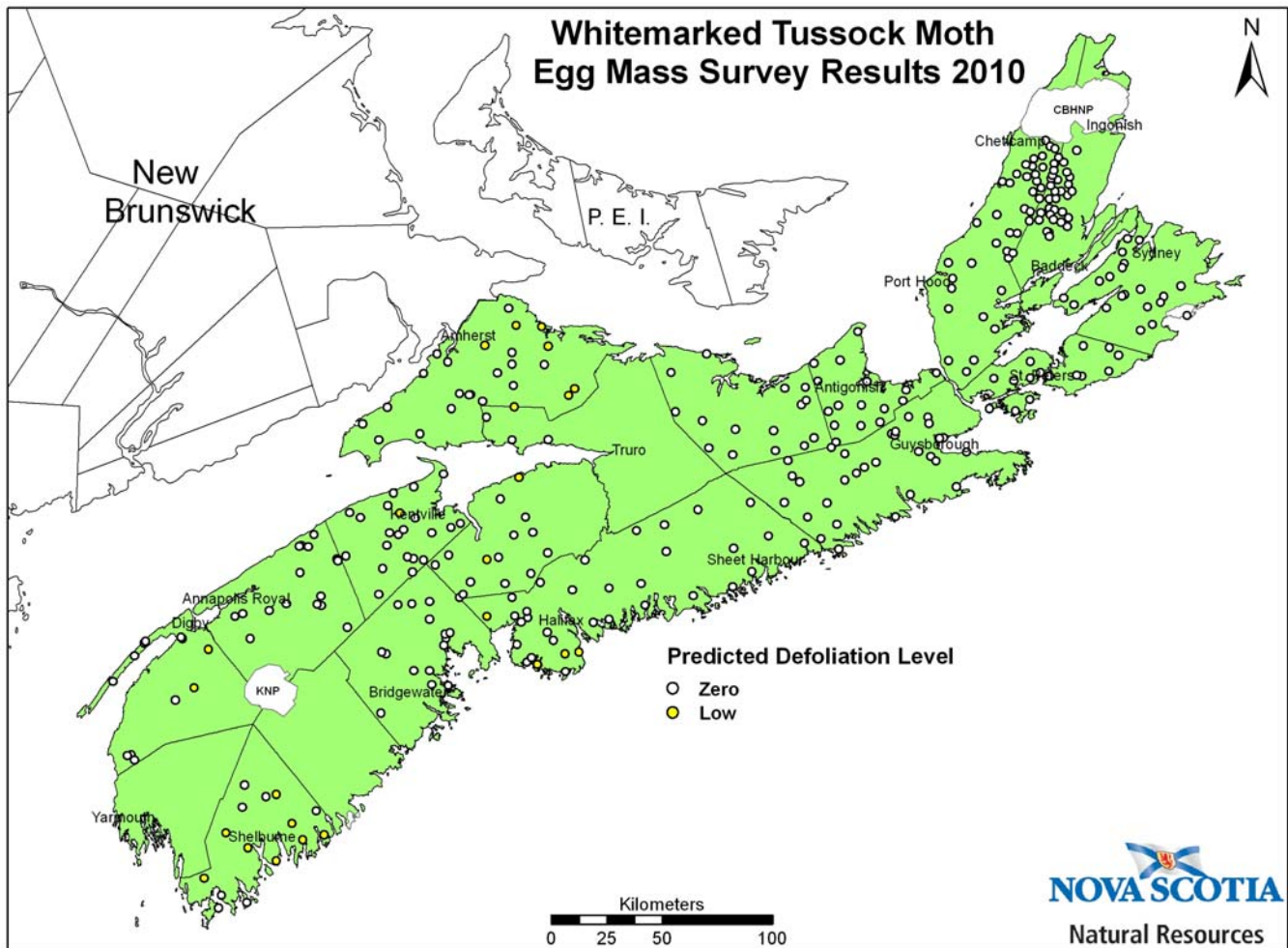
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In 2010, there were 325 sample points surveyed across the province for whitemarked tussock moth egg masses. Results from these points were collected in joint efforts from Forest Health staff as well as Pest Detection Officers (Regional Services).

Of the 325 points sampled, there were 50 egg masses observed. The majority of the egg masses were found in Cumberland and Shelburne Counties. Halifax Co., Hants Co., Digby Co., and Kings Co. also recorded finds.



*Fig. 3 Whitemarked tussock moth egg mass.*



*Fig. 4 Whitemarked tussock moth egg mass survey results, 2010.*

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## Balsam Fir Sawfly 2010

Terry White

In response to defoliation reports from Pest Detection Officers, Forest Health Staff increased the number of sample points for balsam fir sawfly (BFS) in the Central and Eastern Regions. 128 samples were examined for BFS egg niches (Fig. 5).

Of the 128 samples examined, 51% were found to have egg niches (7410 niches in total.) This is the highest percentage recorded since 1999.

The Aerial Overview Survey observations were analyzed by Risk Services and indicated a defoliation of 1277 ha caused by balsam fir sawfly.

Based on the egg niche survey results, potentially high defoliation levels could be observed this year in areas of Guysborough, Antigonish, Inverness and Victoria Counties.



Fig. 5 Balsam fir sawfly egg niches.

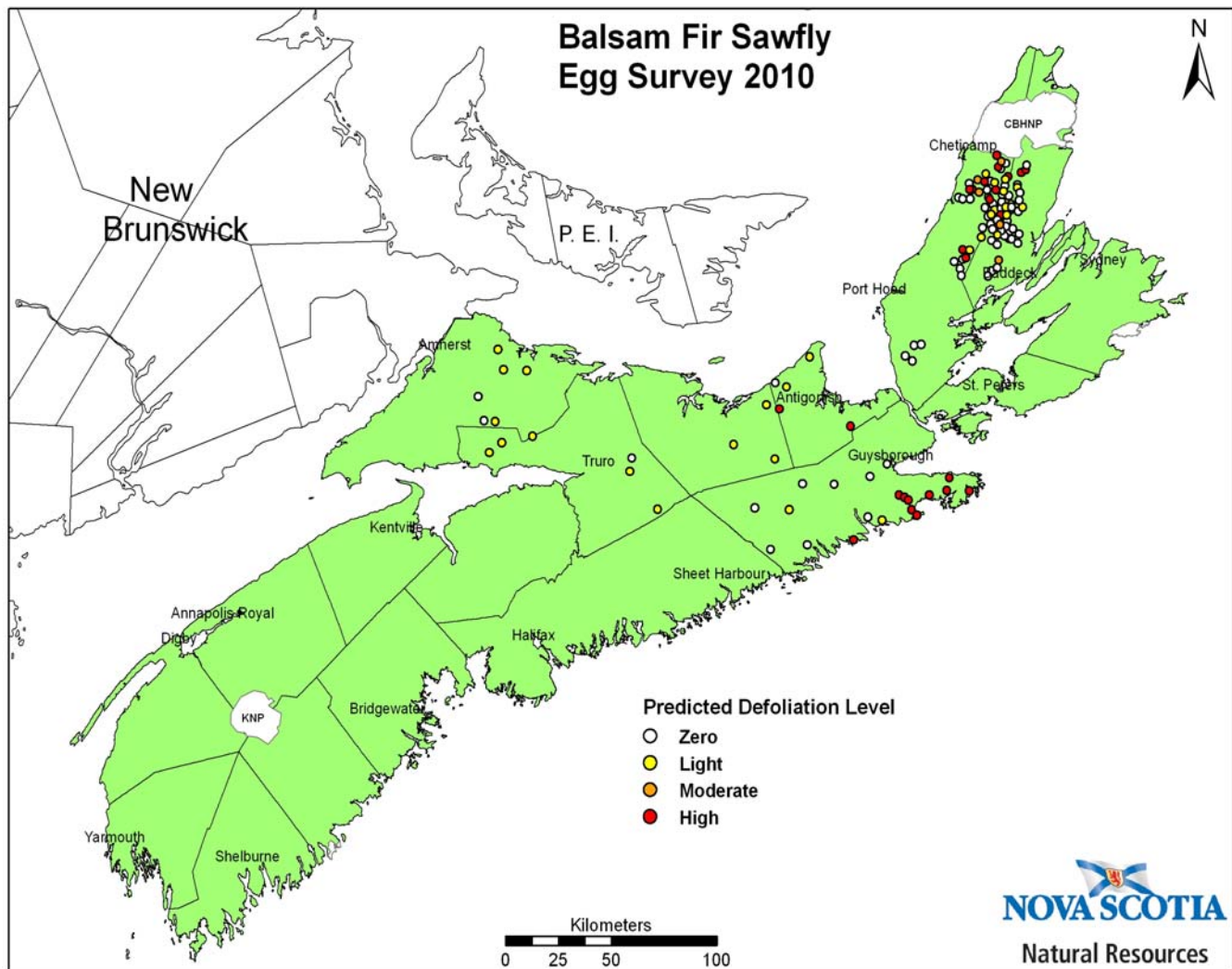


Fig. 6 Balsam fir sawfly egg niche survey results, 2010.

## Hemlock Looper 2010

Jim Rudderham

This year 40 points in Inverness and Victoria Counties were collected and washed for the Hemlock Looper overwintering egg survey. Very low numbers were detected, with only four sites having overwintering eggs. These sites were all in the Cape Breton Highlands.

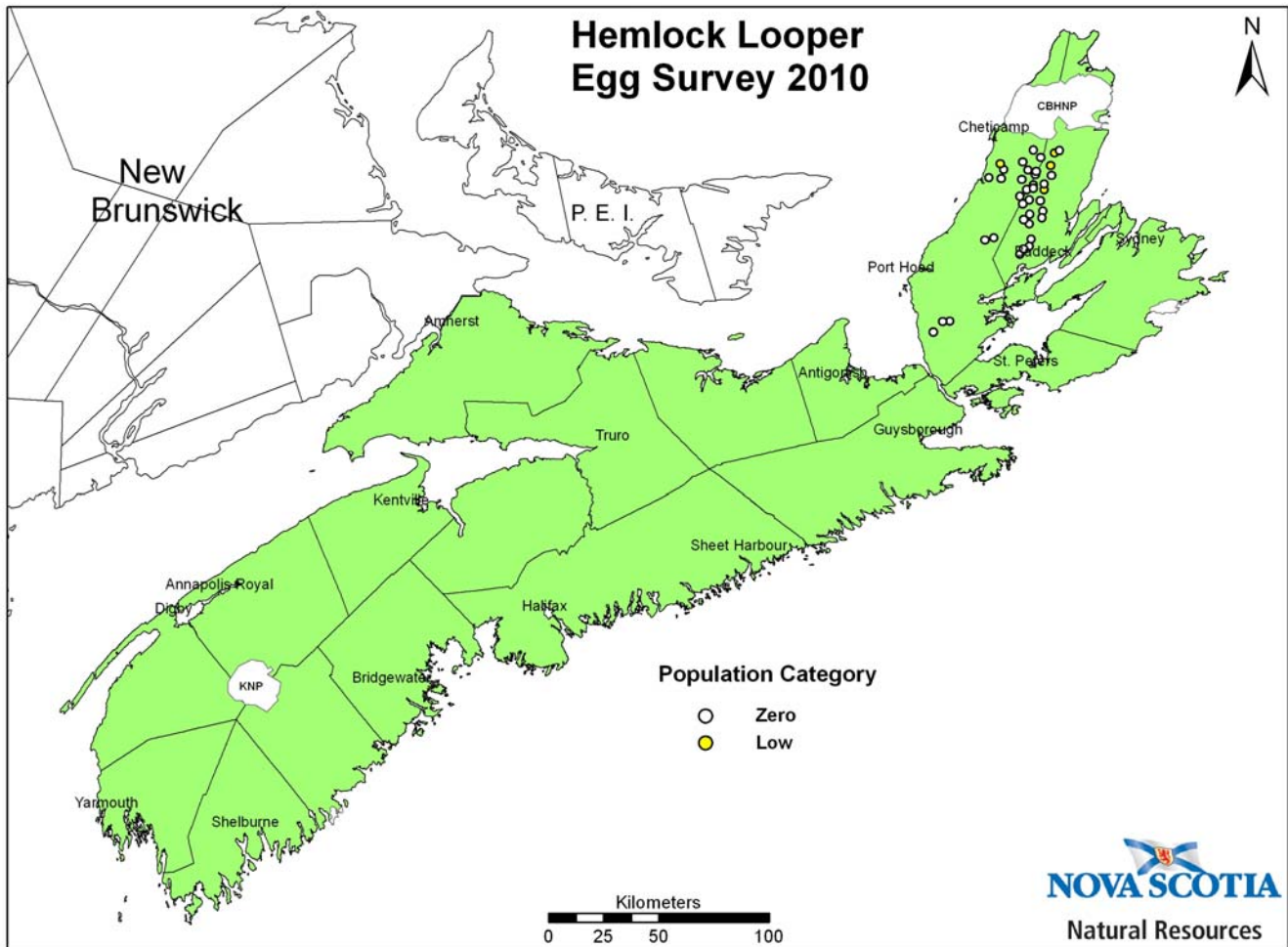


Fig. 7 Hemlock looper egg survey results, 2010.

# The Last Laugh . . .



My five-year-old son squealed with delight when he opened his birthday present from his grandmother. It was a water pistol. He promptly ran to the sink to fill it.

"Mom," I said. "I'm surprised at you. Don't you remember how we used to drive you crazy with water pistols?"

My mom smiled and said, "Yes, I remember."

## Those raccoons are not luggage

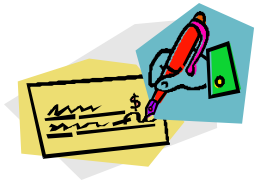
As migration approached, two elderly vultures doubted they could make the trip south, so they decided to go by airplane.

When they checked their baggage, the attendant noticed that they were carrying two dead raccoons. "Do you wish to check the raccoons through as luggage?" she asked.



"No, thanks," replied the vultures. "They're carrion."

An elderly fisherman wrote to a mail order house the following: "Please send me one of those gasoline engines for my boat you show on page 438, and if it's any good, I'll send you a check."



In a short time he received the following reply: "Please send check. If it's any good, we'll send the engine."

## More Wacky Warnings . . .

On a child car safety seat - "Remove child before folding."

"Not for use on moving vehicles." - the warning on the "Off-Road Commode," a portable toilet seat that attaches to a trailer hitch.

A flushable toilet brush warns - "Do not use for personal hygiene."

A smoke detector warns - "Do not use the Silence Feature in emergency situations. It will not extinguish a fire."

A cartridge for a laser printer warns - "Do not eat toner."

A can of self-defense pepper spray warns users - "May irritate eyes."

