Editor’s Overview

I keep hearing that spring is coming but this morning at -16°C, I found it hard to believe. We are all in the process of trying to wrap up the 2003 field season and plan for the 2004 season. Something that appeared on the radar last year was the Pale Winged Grey in the western part of the province. Eric has written an Insect Focus on this puzzling problem that we will be hearing more about as the season progresses.

You’ll find the final piece of pheromone trap data on page 5. The hemlock looper traps are the last of our survey traps to come in. Kim has processed the data and provided the results.

For those of you waiting for the results of the weevil contest, check page 6 for the very creative responses. (Just a sample . . . Midnight in the Garden of Good and Weevil - A true story of murder and pest control in Savannah.) Congratulations to John Huber who submitted the winning response. Although this is Eric’s contest, I had to add my own Honourable Mention . . . Weevil Knievel, submitted by Judith Bridgehouse, Eric Leighton, and Gerald Gloade (once again thanks for the great graphics Gerald).

‘Til next month
Jacqui Gordon
Editor

Say What and Quotes . . .

Great Truths that Little Children Have Learned

No matter how hard you try, you can’t baptize cats.

When your Mom is mad at your Dad, don’t let her brush your hair.

If your sister hits you, don’t hit her back. They always catch the second person.

Never ask your 3 year old brother to watch your food.

You can’t trust dogs to watch your food.

Don’t sneeze when someone is cutting your hair.

Never hold a cat and a Dust-buster at the same time.

You can’t hide a piece of broccoli in a glass of milk.

Don’t wear polka-dot underwear under white shorts.

The best place to be when you’re sad is Grandpa’s lap.

Wolf’s Law of History Lessons
Those who don’t study the past will repeat its errors. Those who do study it will find OTHER ways to err.
**Insect Focus**
Eric Georgeson

**The Pale Winged Grey . . . The Sleeper Awakes?**

**Introduction**

The pale winged grey is one of those moths that entomologists love to lose sleep over. It seems to have come out of nowhere and now is aiming to be the number one feeder on Eastern Hemlock.

This is a moth that was so nondescript that no one paid much attention to it over the years. It is a native moth of the inchworm family of moths and is a general feeder. In fact, it was so nondescript that for a while it was thought to be a rare find in Nova Scotia.

This insect has one generation per year and it is thought to overwinter in the egg stage. It has never been known to cause problems to the forest.

**Hosts**

When I started to put a list together of what this insect eats it kind of reminded me of the Tasmanian Devil on Bugs Bunny . . . it seems to eat anything and not a whole lot of any one thing. A short incomplete list of host plants includes: Manitoba maple, sugar maple, green ash, ash, choke cherry, wild cherry, willow, wire birch, paper birch, caragana, rock elm, American elm, white elm, bur oak, balsam fir, eastern hemlock, apple, pear, gooseberry, cranberry, and currants.

**Behavior**

Feeding behaviour of this insect on Eastern Hemlock in Nova Scotia starts at the bottom of the tree and moves to the upper half. It may have the same feeding pattern as the hemlock looper which generally takes two years to defoliate a tree.

Like many loopers, when disturbed, the caterpillars hold their bodies elongated and stiff attached only by their abdominal prolegs and by doing this they resemble a stalk or twig. This way they throw off hunters.

The adult moths are night fliers, with a 1:1 sex ratio except in light traps where the males will outnumber females . . . Another unexplained mystery of the male psyche.

**Life History**

The female moth lays her eggs under bits of raised bark. The colour of the adults makes them very hard to see when resting on tree trunks especially those trunks covered by lichen.

Adults are generally active during July and until the middle of August. Larvae are found from June until the middle of July. Pupae are in the soil for 13-20 days before the adults emerge. The life cycle in Fig. 1 is based on the best information we have to date.

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*Fig. 1: Life cycle of the pale winged grey.*

**Eggs:**

The eggs are approximately 0.75 mm long. When first laid, the eggs are greenish in colour and then turn to a rusty colouration. This change of colour is good protection from parasites and predators.

**Larvae:**

The larva of the Pale Winged Grey is a typical looper with two pairs of abdominal prolegs. They are 22 to 26mm long in their last larval instar. The young larva has a dark grey body with a rusty coloured head. This contrasts with the rear tip of the larva which tends to be yellowish in colour. The later larval instars become grey-brown or light brown in colour with very fine, ill defined markings on the body. There is a black spot on the side of the larva just to the front of the middle of the body. This spot is often proceeded by a small white patch. There are also four small black spots along the posterior half of the body.
Pupa:
The pupa is a very average looking with a length that ranges from 10 to 11 mm and is 3 to 4 mm wide and brown in colour.

Adult:
The major problem with this moth is that it resembles so many other species in this family. The moth has a 22 to 30 mm wingspan and the head and body are light grey in colour. On the head the vertex is light grey with a dark grey band running between the antennal bases. Sometimes there is a dark grey band across the vertex itself. The forewing and hindwing have both blackish and reddish transverse and oblique lines. The longest of the wavy lines on the forewing has a pronounced curve which in combination with three “comma like” markings on the leading edge of the forewing help in the identification of this moth.

The Mystery
The big question in a lot of people’s mind is why this insect has turned into a Doctor Jekyll and Mr. Hyde act. Going from a mild mannered general feeder to a major defoliator of eastern hemlocks. But how long is it going to keep the act up and how far is it going to spread in Nova Scotia? It could be like an number of other insect pests that appear suddenly, do a lot of damage and then just as quickly drop out of sight. Then on the other hand it may be a new adaptation of this insect towards becoming a primary pest on the hemlock.

Plans are being put in place to study this insect in more detail starting this spring. It is also hoped that a method to do a predictive survey can be developed along with some controls options. But this will depend on how many resources can be found.

New Element Discovered
Eric Georgeson
Recently in the news there have been reports that two more chemical elements have been discovered. However there actually has been a third element discovered according to internet sources. (if it’s on the internet it must be true!)

A major research institution recently announced the discovery of the heaviest element yet known to science, tentatively named “Administratratium.” Administratratium has one neutron, 12 assistance neutrons, 75 deputy neutrons, and 111 assistant deputy neutrons, giving it a mass of 312. These 312 particles are held together by a force called morons, which are surrounded by a vast quantities of peons.

The Power of the Mind
Jacqui Gordon
I received this email and was assured that I would be able to read it, and funny enough I could. Does this bring into question the time spent proofreading?

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Take Two Maggots and See Me in the Morning
Eric Georgeson

While listening to a show on the local radio station called “Holland Calling”, I heard that Europe is rediscovering Maggot Medicine. Doctors from the Netherlands found while working in war-torn Africa that patients with maggots in their wounds not only suffered from less infection but also recovered from their wounds faster. (This was something that was discovered by military doctors during World War One.)

Researchers applied sterilized blow fly maggots to severely infected wounds of a number of patients who were at risk of losing a limb to the infection. The doctors found that not only was the limb saved but the maggot treatment caused the healing to occur faster. The maggots not only eat dead tissue but at the same time produce a secretion that prevents infection. The big draw back is the “ick factor”. In other words, people don’t like the thought of maggots crawling directly on their wound let alone seeing them do it. To overcome this problem researchers developed a teabag sized pouches made out of porous material to hold the maggots. They can still feed through the pores but cannot roam at will.

The broadleaf defoliator rap

Looking like a cataclysm,  
Feeding with fanaticism,  
Laying bare, laying waste,  
Gorging with unbridled haste.
Stripping down to the ground,  
All that’s verdant, tasty, and lush.  
That’s our way, everyday,  
Gnawing, growing, moving on,  
All in a massive rush.
But we ain’t evil, scheming, diabolical,  
We’re natural, regular, cyclical, typical.  
So don’t be dissin’ us,  
For soon you’d be missing us.  
Trees all defoliated soon get refoliated.  
The crap we drop down,  
Gives nutrients to the ground.  
So maybe some growth we might cause to stall,  
But we’re engines for forest recycling y’all.

Author unknown, but suspected.
Eric found this piece in the  
April 2003 issue of “Bugs & Diseases”

The Provincial Entomologist’s Bug News

Welcome back to the old ice age! I remember reading some papers last summer on “climate change” and what the scientists were saying was that we’re really not out of the last ice age yet. I laughed to myself at the time . . . I’m not laughing now. Last spring we had the flood of the century. This summer we had the hurricane of the century and now this winter we had the blizzard of the century. Why I’m just tingling all over with excitement waiting for what next “of the century” is coming our way.

The question I have in my mind is how are the insects and other pests going to respond to all the stress put onto the forest. I personally think that for the most part they’re going to do quite well.

Insects by nature are great opportunists and right now there are lots of opportunities in the forest for them to exploit. The native spruce beetle will have a field day with all the dying and damaged spruce trees in the hurricane damage zone. As their populations grow chances are that they will start to overwhelm even healthy, undamaged spruce trees just by sheer numbers alone.

The appearance of the native insects such as the Pale Winged Grey in the western end of the province may be an example of opportunism. Normally this insect was a nobody. A general feeder on a large number of different hosts only mentioned in passing in a small number of scientific papers. Suddenly, for no apparent reason it does a “Jekyll and Hyde” act and begins to take out eastern hemlock like it was a primary pest of these trees. (See this issue’s Insect Focus).

Outside of a few calls regarding cluster flies and snow fleas, it has been fairly quiet but I have a feeling that this won’t last long.

Special thanks to Wayne for sending me “The Perks of Being Over 50”. There were three Perks that really hit close to the mark for me . . .
1. People call at 9pm and ask, “Did I wake you?”
2. You sing along with elevator music.
3. Your secrets are safe with your friends because they can’t remember them neither.
5. You can no longer keep track of numbers.

‘Til next time,

Eric

Eric Georgeson, Provincial Entomologist
**Project Update**

**Hemlock Looper Pheromone Trap Results**
Kim George

Traps were placed province-wide by Pest Detection Officers and IPM staff in 149 locations. Many of the catch results fell into the zero to low category, however a few locations had moderate to high level catches of hemlock looper moths. All moderate to high moth catches were located in the Cape Breton Highlands, both in Inverness and Victoria Cos. Five locations had moth counts in the moderate hazard category, while 3 locations fell into the high hazard category. Additional branch samples were collected in the areas with moderate to high moth catches for the hemlock looper egg wash.

**Notes for PDO’s**

**Traps**
If you have any pheromone traps hanging around the office (yes, I know they make lovely additions to any decor), could you please gather them up and send the back to us at the Insectary. We’re gearing up for this year’s surveys and supplies are in high demand.

**PDO Meeting**
Plans are underway for this yearly meeting/training day. We will be inviting PDO’s, their #1 helpers, industry representatives, and survey cooperators. Stay tuned to your fax machine for further information.

**Pine Shoot Beetle Traps**
These traps go out early so expect them to arrive soon.

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And what to expect for next year . . . only the critters know for sure . . . and they’re not telling!

Editor’s Note: Yeah I know, the “E” was blown away by high winds.
Weevil Contest
The Results

To say the least, there are some very witty people out there . . . especially when it comes to weevils. I cannot tell you how much I enjoyed receiving these entries. Actually I enjoyed it so much that I want to share them with you. In no particular order . . .

Yea, though I walk through the valley of death I will fear no weevil.

Jenny Costello

Who knows what weevils lurk in the hearts of men?

A mis-quote from Mae West: When choosing between two weevils, I always like to try the one I've never tried before.

Nietzsche's (other) book: Beyond Good and Weevil.

Weevils wobble but they don't fall over.

Chris Maund

Weevil Definitions:
Prime weevil: Grade A weevil steaks.
Mediweevil: A 500 year old bug of moderate length.
Labrador Retweevil: a big hairy bug that loves water.
Weevilution: mindless, spineless, vermin, going in circles.

A bug, let's call him Perceevil,
Jumped, with instinct primeval,
From a tree with delight.
As he sailed into flight,
Said, "Call me Weevil Knievel".

Eric Leighton

Weevil Knievel.

Judith Bridgehouse

Weevil grows, where weevil knows.

"The weevil made me do it " (aka The devil made me do it.)

Derek Bridgehouse

Weevil Knievel.

Dr. Weevil and mini me.

Weevilis Presley.

Gerald Gloade

Ach so? Ze little pests sink they are so smart! Entomologists of ze world unite. Wee vil fight zem in ze bushes, wee vil fight zem in ze trees, wee vil never give up and WEE VIL OVERCOME!

John Huber

It was hard to pick a Grand Prize winner as I liked all the entrees so after some sleepless nights of tossing and turning and realizing that the deadline was fast approaching (I could tell by the slight whooshing sounds coming towards me) I picked John Huber's "Ach so". Well done John! Your prize will be in the mail as soon as I can collect enough pop cans to pay for the postage . . . darn cutbacks.